JANUARY 31, 1955 Creating Tomorrow's Traffic . . . p. 21

RAILWAY AGE

One of Five Simmons-Boardman Railway Publications

IN THIS ISSUE:

Technological Progress Enough?

New Heaters in CL Thaw Sheds

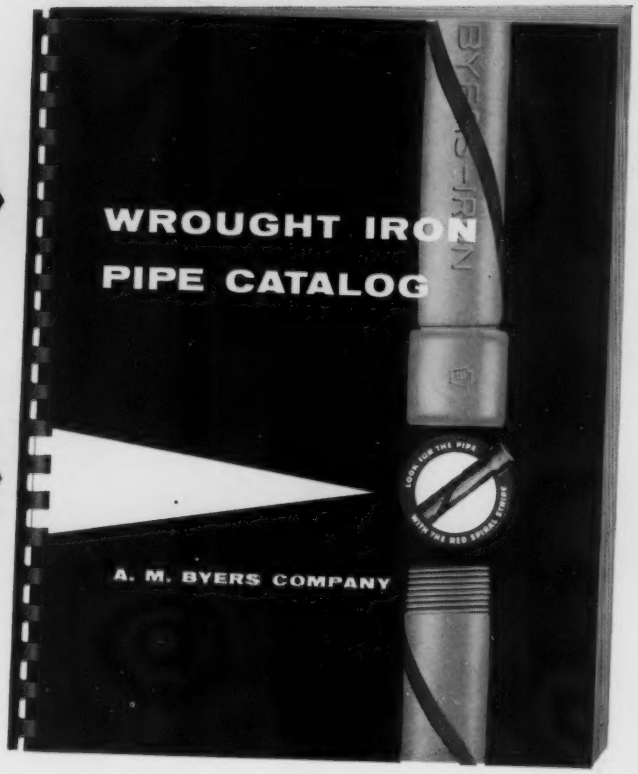
What ACL Does About Diesel Fires

Six Aspects of The Hot-Box Problem

Selling Pullman Space in Seconds

NEW!

WROUGHT IRON PIPE CATALOG



. . . Complete facts and figures

The NEW Byers Wrought Iron Pipe Catalog wraps up between covers complete facts and figures on wrought iron pipe and tubular products.

You'll find:

. . . information on the characteristics of wrought iron and why it resists corrosion and vibration longer

. . . a complete section on wrought iron's physical properties

. . . detailed instructions on how to specify, plus a list of wrought iron standards and specifications

. . . proper ordering methods so you get exactly what you want for the job

. . . general notes on mill standards

. . . complete tables on every type of wrought iron pipe, conduit, cold drawn tubing, with detailed data on sizes, dimensions, weights, mill test pressures

. . . helpful tables on decimal equivalents for calculating; dimensions of pipe in fractions of an inch; conversion factors

Important, too, is the organization and arrangement of this material. The catalog's format makes charts and tables easy to find, easy to read and follow. You'll like the way the plastic spiral binding keeps the catalog flat while you use it . . . important with a 52 page catalog.

Your copy is ready. Write for it today!

A. M. Byers Company, Pittsburgh, Pa. Established 1864. Boston, New York, Philadelphia, Washington, Atlanta, Chicago, St. Louis, Houston, San Francisco. Export Department: New York, N.Y.

Available throughout the world.

BYERS

CORROSION COSTS YOU MORE THAN WROUGHT IRON

WROUGHT IRON

TUBULAR AND HOT ROLLED PRODUCTS

ELECTRIC FURNACE QUALITY STEEL PRODUCTS

6 ways to save money in communications

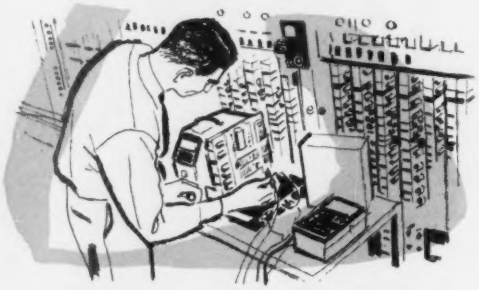
If you are interested in saving money and, at the same time, increasing efficiency of railroad communications, this would be a good time to have a joint review of specific problems made with Bell System engineers. Ask your Bell Telephone representative how this can be arranged, without cost.

BELL SYSTEM GIVES YOU COMMUNICATIONS AT LOW COST

TAILORED COMMUNICATIONS—Bell System engineers fit your communications to your needs. You get precisely what you require. No more, no less.

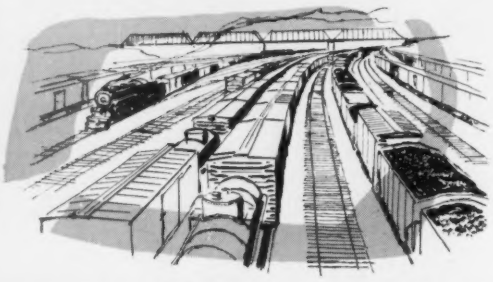
ROUNDED EXPERIENCE—79 years of experience in solving every communications problem goes to work to give you economical Bell System communications.

FLEXIBLE COMMUNICATIONS—Designed to meet your exact requirements, Bell System communications may be expanded or rearranged to promptly match the changing needs of your business.



NO MAINTENANCE HEADACHES—Repair and replacement problems are Bell System's responsibility. This results in savings to your road.

NEWEST EQUIPMENT—New developments in communications are available without investment of railroad capital. This keeps service at peak efficiency.



RAILROAD'S MONEY is available to invest in revenue-producing projects, not tied up in communication equipment. That's another important consideration!

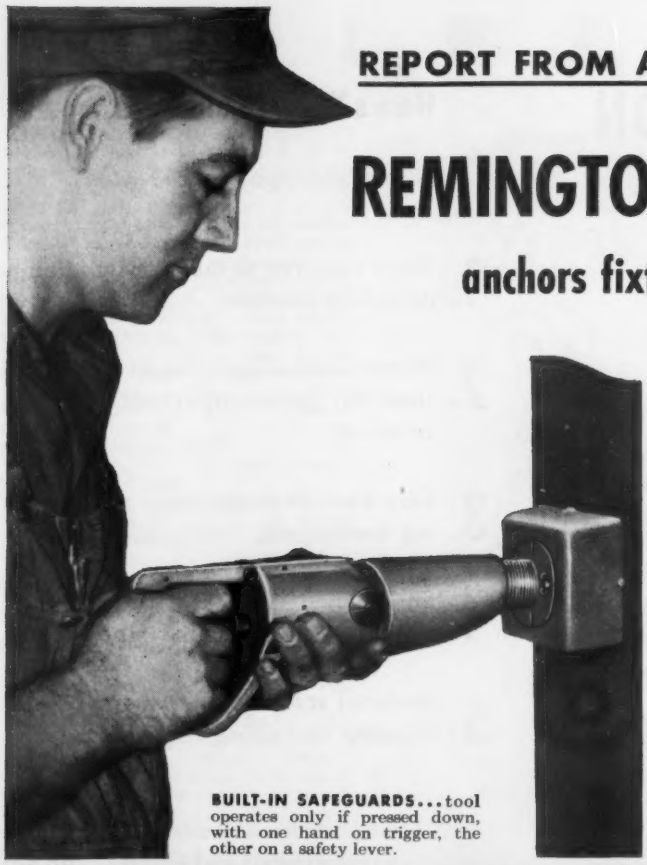
BELL TELEPHONE SYSTEM

TELEPHONE MOBILE RADIO TELETYPEWRITER INTERCOMMUNICATION PAGING SYSTEMS TELEMETERING AND REMOTE CONTROL

REPORT FROM A RAILROAD CAR SHOP:

REMINGTON STUD DRIVER

anchors fixtures to steel 5 times faster!

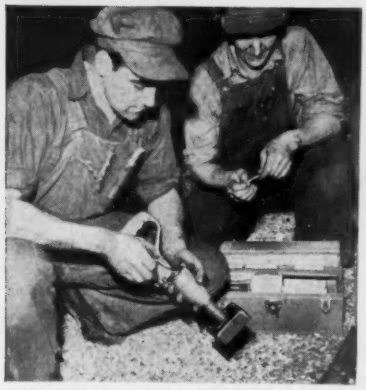


BUILT-IN SAFEGUARDS... tool operates only if pressed down, with one hand on trigger, the other on a safety lever.

Fastening jobs are a matter of minutes at a large eastern car shop. As the shop foreman puts it: "Since the Remington Stud Driver became a standard maintenance tool, steel-to-steel fastening can be done 5 times faster than former methods." Over 5,000 studs have been set in 4 months with this handy, lightweight (6-pound) tool at great savings in time and labor.

Chief advantage of the Stud Driver is its source of power—a 32 caliber cartridge. It drives a stud into the hardest steel or concrete . . . makes the tool independent of outside power sources. No job is "out of the way" for the *self-powered* Stud Driver! You can anchor switch boxes, conduit, steel plates wherever they are—at speeds up to 5 studs per minute!

Find out how the Remington Stud Driver can cut time on the job for you. Send coupon for complete details, including suggested applications.



IT'S EASY to load the Stud Driver for action. Cartridge and stud are preassembled, slipped into the tool in seconds.

IT'S FAST. Operator notes spot where stud is to be set and squeezes trigger. No time-consuming drilling!

IT'S PERMANENT. Stud is embedded into the hardest steel or concrete. There are Remington Studs for every type fixture—break-off, threaded, etc.

MAIL THIS COUPON TODAY! ⟶

"If It's Remington—It's Right!"

Remington

DUPONT

Listed & Approved by Underwriters' Laboratories, Inc.

Industrial Sales Division, Dept. R.A.-1
Remington Arms Company, Inc.
Bridgeport 2, Conn.

Please send me a free copy of the new booklet showing how I can cut my fastening costs.

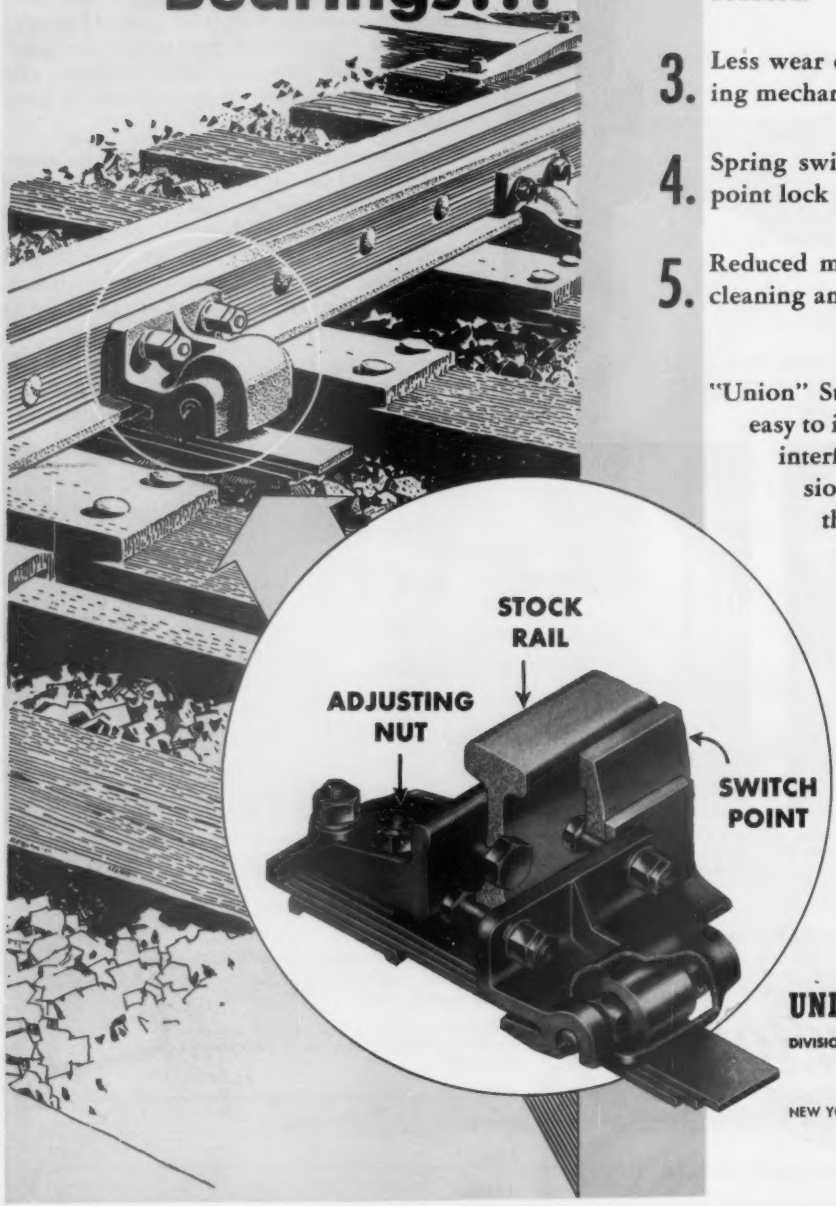
*Name*_____

*Position*_____

*Firm*_____

*Address*_____ *City*_____

IMPROVED SWITCH OPERATION *with* "UNION" Roller Bearings...



Here's What the Records Show!*

**Factual data supplied upon request.*

1. Force required to move switch points materially lessened.
2. Power consumption and operating time for power-operated switches reduced.
3. Less wear of connections and operating mechanism.
4. Spring switch and mechanical facing point lock performance improved.
5. Reduced maintenance costs . . . less cleaning and oiling required.

"Union" Style R Roller Bearings are easy to install and adjust . . . do not interfere with tie tamping. Occasional lubrication is about all the attention they require. Ask any "Union" district office for complete information.

NEW MOVIE AVAILABLE

entitled, *"AT THIS MOMENT"*—showing a vivid story of modern railroad progress. Length 26 minutes, on 16 mm. color sound film. For use of film write: United World Films, Inc., 1445 Park Ave., New York or Association Films, Inc., 347 Madison Ave., New York.

UNION SWITCH & SIGNAL

DIVISION OF WESTINGHOUSE AIR BRAKE COMPANY

SWISSVALE PENNSYLVANIA

NEW YORK • CHICAGO • ST. LOUIS • SAN FRANCISCO

RAILWAY AGE

EDITORIAL AND EXECUTIVE OFFICES AT 30 CHURCH STREET, NEW YORK 7, N. Y., AND 79 WEST MONROE STREET, CHICAGO 3, ILL. BRANCH OFFICES: 1081 NATIONAL PRESS BUILDING, WASHINGTON 4, D. C.—TERMINAL TOWER, CLEVELAND 13, OHIO—TERMINAL SALES BUILDING, PORTLAND 5, ORE. — 1127 WILSHIRE BOULEVARD, LOS ANGELES 17, CAL.—244 CALIFORNIA STREET, SAN FRANCISCO 4, CAL. — 3908 LEMMON AVENUE, DALLAS 19, TEX. — 1810 PONCE DE LEON BOULEVARD, CORAL GABLES, FLA.

EDITOR ..... James G. Lyne
EDITORIAL CONSULTANT..... Samuel O. Dunn
EXECUTIVE EDITOR..... William H. Schmidt, Jr.
MANAGING EDITOR..... C. B. Tavenner
CONSULTING EDITOR ..... C. B. Peck
NEWS & FINANCIAL EDITOR..... Gardner C. Hudson
WASHINGTON OFFICE
Walter J. Taft, Robert B. Keane
WESTERN EDITOR ..... M. H. Dick
TRAFFIC & TRANSPORTATION DEPARTMENT
Robert G. Lewis, John W. Milliken, Joe W. Kizzia
MECHANICAL DEPARTMENT.....
H. C. Wilcox, E. L. Woodward, C. L. Combes, G. J. Weihofen
ELECTRICAL DEPARTMENT.... Alfred G. Oehler
ENGINEERING DEPARTMENT.....
Radford E. Dove, Halbert H. Hall, Robert F. Lindsay
PURCHASES & EQUIPMENT..... Fred C. Miles
SIGNALING & COMMUNICATIONS
John H. Dunn, Robert W. McKnight
WESTERN NEWS DEPARTMENT.... A. M. Cox, Jr.
EDITORIAL PRODUCTION..... Ralph M. Schmidl
ASSOCIATE EDITOR ..... Charles Layng
LIBRARIAN ..... Edith C. Stone
EDITORIAL ASSISTANTS.....
June Meyer, Ann Ortlinghaus, Wanda Brown, Emma Rehm

SUBSCRIPTION TO RAILROAD EMPLOYEES ONLY IN U. S., U. S. POSSESSIONS, CANADA AND MEXICO, $4 ONE YEAR, $6 TWO YEARS, PAYABLE IN ADVANCE AND POSTAGE FREE. SUBSCRIPTION TO RAILROAD EMPLOYEES ELSEWHERE IN THE WESTERN HEMISPHERE, $10 A YEAR; IN OTHER COUNTRIES, $15 A YEAR—TWO-YEAR SUBSCRIPTIONS DOUBLE ONE-YEAR RATE, SINGLE COPIES 50c, EXCEPT SPECIAL ISSUES $1. CONCERNING SUBSCRIPTIONS ADDRESS ROBERT G. LEWIS, VICE-PRESIDENT, 30 CHURCH ST., NEW YORK 7.

Published weekly by the Simmons-Boardman Publishing Corporation at Orange, Conn., and entered as second class matter at Orange, Conn., under the Act of March 3, 1879. Name registered in U. S. Patent Office and Trade Mark Office in Canada. Simmons-Boardman Publishing Corporation: James G. Lyne, president. Arthur J. McGinnis, executive vice-president and treasurer. Samuel O. Dunn, chairman emeritus. J. S. Crane, vice-president and secretary. Harry H. Melville, C. W. Merriken, John R. Thompson, William H. Schmidt, Jr., J. S. Vreeland, Fred W. Smith, Robert G. Lewis, vice-presidents. Michael J. Figa, Jr., director of production. Ralph E. Westerman, assistant treasurer.

January 31, 1955 **Vol. 138, No. 5**

Week at a Glance

"There is tangible evidence, for the first time in many years, of interest at high government levels in the plight of the railroads"—and "many people would like to help," railroad advertising managers were told by the chairman of the Committee of Railroad Suppliers. 6

An integrated network of piggyback service, involving five railroads in eight states, is beginning to shape up in the West. 7

"Petty regulation" of transportation companies should be ended, in the opinion of ICC Chairman Mitchell, who has just reiterated his previously expressed views as to the pressing need for drastic changes in regulatory laws. 8

FORUM: Technological progress is only part of the reason for the success and prosperity of modern industry, other important contributors to which are "marketing experts." 17

On the Frisco, traffic department representatives play a major part in helping the development department locate new industries on line. 21

Cabooses glamorize freight trains on the Burlington because of their bright aluminum paint. 25

JCL heaters in thaw sheds have cut operating costs by 50%, reduced maintenance expense and speeded car handling. 26

Attack on the hot-box problem was highlighted at a recent New York Railroad Club meeting. 28

ACL's fire insurance rate is the "most favorable in its history," as a result of its decision to standardize on use of dry chemical fire equipment. 30

The packing cup with a pedigree

WABCO®

Check the numbers on a Wabco packing cup or gasket. You'll find the date of manufacture, piece number and even the mold number embossed on each piece.

Wabco packing cups and gaskets give exceptionally long service year in and year out. Re-order the same molded-in piece number with the assurance you'll receive the same high quality product.

For maximum service life, standardize on genuine Wabco products—the renewal parts with the built-in pedigree.

Westinghouse Air Brake COMPANY

AIR BRAKE DIVISION WILMERDING, PA.

NEW MOVIE AVAILABLE entitled, *"AT THIS MOMENT"*—showing a vivid story of modern railroad progress. Length 26 minutes, on 16 mm. color sound film. For use of film write: United World Films, Inc., 1445 Park Ave., New York or Association Films, Inc., 347 Madison Ave., New York.

Current Statistics

Operating revenues, eleven months	
1954	$8,572,897,474
1953	9,848,917,002
Operating expenses, eleven months	
1954	$6,755,791,805
1953	7,438,438,928
Taxes, eleven months	
1954	$ 821,549,247
1953	1,162,856,463
Net railway operating income, eleven months	
1954	$ 765,606,661
1953	1,031,517,291
Net income, estimated, eleven months	
1954	$ 547,000,000
1953	799,000,000
Average price railroad stocks	
January 25, 1955	83.70
January 26, 1934	82.45
Carloadings, revenue freight	
Two weeks, 1955	1,247,143
Two weeks, 1954	1,244,100
Average daily freight car surplus	
Wk. ended January 22, 1955	71,954
Wk. ended January 23, 1954	118,048
Average daily freight car shortage	
Wk. ended January 22, 1955	730
Wk. ended January 23, 1954	548
Freight cars on order	
January 1, 1955	15,317
January 1, 1954	29,950
Freight cars delivered	
December 1954	2,173
December 1953	4,456
Average number railroad employees	
Mid-December 1954	1,027,267
Mid-December 1953	1,155,071

RAILWAY AGE IS A MEMBER OF ASSOCIATED BUSINESS PUBLICATIONS (A.B.P.) AND AUDIT BUREAU OF CIRCULATION (A. B. C.) AND IS INDEXED BY THE INDUSTRIAL ARTS INDEX, THE ENGINEERING INDEX SERVICE AND THE PUBLIC AFFAIRS INFORMATION SERVICE. RAILWAY AGE INCORPORATES THE RAILWAY REVIEW, THE RAILROAD GAZETTE, AND THE RAILWAY AGE GAZETTE.

Departments

Education	14
Equipment & Supplies	15
Figures of the Week	35
Forum	17
In Congress	11
Law & Regulation	8
Operations	7
People in the News	14
Public Relations	6
Questions and Answers	20
Railway Officers	35
Safety	10
Traffic	35

Week at a glance CONTINUED

A PRR reservation and ticket selling system at Philadelphia is said to give passengers the fastest service ever offered. 33

BRIEFS

First private carrier to try out Canadian piggyback was the Labatt Brewing Company, which recently routed a "strictly experimental" shipment of 1,200 cases of beer (and a return load of empty bottles) from London, Ont., to Toronto via Canadian Pacific.

"Ladies Day" fares, to New York and return, offered by the New Haven every Wednesday for the price of a one-way ticket, have proved so successful they have been extended to May 1. To date, more than 20,000 women have used them, an average of over 2,500 each week; banner day was December 29—4,600 sales.

New transcontinental trains, fully dieselized, newly equipped, and operating on considerably faster schedules than any present train, will be inaugurated by both major Canadian railroads between Montreal, Toronto and Vancouver beginning April 24.

No less than 1,162 suits are being filed by Illinois to collect some $15 million in back truck license fees. For 1952 the state legislature authorized increased fees on a gross weight, rather than mileage, basis. During litigation which followed (culminating in the U. S. Supreme Court's February 1953 decision upholding the new fees) many truckers paid at the old rate. Since then, less than $9 million in back fees due has been volunteered by truckers.

"Complete access to our records, statistics or anything else which will aid them in their study of New England's transportation problems," has been offered by Boston & Maine president T. G. Sughrue to governors of New England states (*Railway Age,* January 17, page 7). At the same time, he asked that special attention be paid to the Boston commuter situation.

Is the Worm Turning?

"For the first time in many years there is tangible evidence of interest in the plight of the railroad industry at high government levels . . . Many business and financial people, and shippers, would like to help," railroad ad managers are told.

How do people feel about railroads? Who might be willing to help them?

Answers to those questions—obtained from more than eight months of research for a new approach toward public understanding of the broad problems of the railroad industry—were outlined to the Association of Railroad Advertising Managers at its annual convention, in Chicago, January 21.

The speaker, Fred Smith, president of Fred Smith & Co. and director of the recent campaign by the Committee of Railroad Suppliers (*Railway Age*, July 7, 1954, pages 7 and 21), told of his talks with railroad presidents, suppliers, shippers, "a wide variety" of business and financial leaders, and government officials in quest of a new means to stimulate public understanding of railroads and their problems. Said Mr. Smith:

"Among shippers we encountered a wide variety of criticisms of railroads' traffic activities and of what shippers believed was a remarkable disinterest, on the part of railroads, in damage. Yet it was not difficult to find a genuine interest in railroads. I have yet to talk to a shipper who would not prefer to ship by rail if price, service and safety factors were approximately equal. This is an asset of inestimable value to the railroad industry, and one which in the end will prove their salvation."

In business, Mr. Smith said he found the "same rich vein of interest lying deep." Many businessmen, he continued, "lack confidence in the management of the railroad industry in an instinctive way; most do not appreciate the full significance of the hurdles placed in the way of efficient railroad management, and some are inclined to feel that railroads overestimate their difficulties and under-apply their talents. In spite of this, they have a fundamental interest in the railroad business and would be more than willing to lend a hand if they felt they could provide any productive assistance.

"In the financial community . . . you will go a long way before you find a financial man who will refuse to warm up to discussion of the future of railroads 'if only they could be modernized'."

It was through this underlying interest in the industry that the committee set out to build in its campaign public confidence in railroad management, he said. The committee's message was aimed at the business and financial community as "the most logical minority group" who would inspire Congress to act by creating a public demand for reform.

Program Formed?—Mr. Smith said a "usable legislative program may already have been developed for the whole transportation business." The President's Cabinet Committee, he said, "has made its recommendations and there is reason to believe the administration will make a recommendation to Congress. This means we may be well along the way toward a legislative program—much further than we had any reason to hope for in the earlier days on our committee's planning."

He described a five-point program of legislative proposals which an industrial-financial group might advocate. It would include: freedom to set rates; a means for financing by private groups to provide railroads with funds larger than their actual condition might merit; interim financial aid from governmental sources and/or tax relief; an assessment of labor problems stemming from government participation through the Railway Labor Act; and provision for stockpiling equipment to meet sudden demands of an international crisis.

Not Academic—Such a program, Mr. Smith said, would be far less academic than it might seem. "For the first time in many years there is tangible evidence of interest in the plight of the railroad industry at high government levels, and we have ample assurance that there are many business and financial people, and shippers, who would like to help the railroads. Moreover, we are continually faced with the possibilities of a critical situation developing in which railroads would be essential to defense of the nation.

"Finally, we must face the fact that some of our major railroads are having a desperate time.

"With these facts in mind, I think it is high time all of us give serious thought to exactly what ought to be done, that the railroad industry get itself ready for the last-ditch drive which many of us believe is at hand, and that we take full advantage of the

RAILROAD ADVERTISING MANAGERS change officers. Leo A. Brown (center), director of advertising and public relations of the Wabash, turns the gavel of the Association of Railroad Advertising Managers over to Alfred E. Greco, assistant to vice-president, traffic, Pullman Company, and newly elected president of the group. Others, from left to right, are: A. E. Eckstein, Illinois Central; elected executive secretary; A. W. Robertson, Missouri Pacific, elected vice-president; E. F. Waldrop, Seaboard Air Line, elected treasurer; D. B. Wallace, Canadian Pacific, elected first vice-president; and H. F. Tate, Jr., Missouri-Kansas-Texas, elected vice-president. Mr. Brown is immediate past president.

fact that powerful people are ready to plead the case for the railroad industry if a clearcut case were there to plead."

Won Award—The suppliers' committee received the advertising managers' first prize for institutional advertising toward a better understanding of American railroads in 1954. The award was part of ARAM's fourth annual advertising competition. Honorable mention scrolls were awarded to the General Electric Company and to American Steel Foundries for their efforts in this same direction.

The General Foods Corporation's Post Cereals division was awarded the association's first prize plaque for advertising in the railroad traffic promotion field. Honorable mention went to the Great Lakes Steel Corporation's steel floor division and to ACF Industries, Inc.

"Saturation Advertising"—Clifford A. Somerville, publicity manager of the Boston & Maine, reported to the ARAM meeting on results of the month-long campaign of "saturation advertising" of passenger service which his company tried out at Concord, N.H., last summer (*Railway Age*, July 19, 1954, page 6).

"Despite absence of any proof that the saturation program increased our passenger business," he said, "there was sufficiently good public relations reaction to warrant further experimenting with this type of advertising and promotion. . . . It is the intention of our advertising committee to try similar programs in 1955 in Portland, Me., Portsmouth and Manchester, N.H., and Fitchburg and Haverhill, Mass."

"We expect," Mr. Somerville added, "that with the experience we had in this Concord program we will be able to work even more effectively in other communities in 1955 and we should be able to do a better statistical job in evaluating results."

While the Concord program was primarily aimed at increasing local passenger traffic, *Railway Age* has been advised that it incidentally produced a number of long-distance rail trips which, otherwise, probably would have been made by air.

NEW TRAILERS, NEW TRAIN—The Southern Pacific's "Pacific Coast Expediter" links eight Western states in a piggyback network.

Operations

Growing Piggyback Network

New SP San Francisco-Portland service permits connecting piggyback operations in eight states—Northern Pacific to begin Portland-Seattle service February 1

The two 24-ft insulated trailers shown above are ready to begin service between the San Francisco Bay area and Portland, Ore., on the Southern Pacific's "Pacific Coast Expediter" January 31. The new train will provide shippers with second-morning delivery for trailer-on-flat-car traffic between the Northwest and San Francisco Bay area cities. Third-morning delivery is scheduled between the Northwest and the Los Angeles area by connection with the SP's San Francisco-Los Angeles "Overnights."

On February 1, the Northern Pacific will begin daily local overnight piggyback service between Portland and Seattle. It also will provide a connecting service with the SP at Portland, with schedules coordinated between the two roads. The NP says its service will provide door-to-door pickup and delivery of both trailer loads and lcl. Late night departures and early morning arrivals are scheduled in both directions. Later, as details of the service are worked out, other coast cities will be included, the NP adds.

The SP has issued a large folder announcing its "Expediter" service. A map therein shows connecting service at Portland by the Union Pacific and the Great Northern as well, although such services have not been announced to date by those roads. The map also shows piggyback service on the Northwestern Pacific, an SP subsidiary, between San Francisco Bay area and Ukiah, Cal.—114 miles.

The "Expediter" is scheduled to operate on the Klamath Falls route, but piggyback service by connection will be operated by the SP to various cities on its Grants Pass route and also to the coastal cities of Tillamook, Ore., and Coos Bay.

By connection with the UP at Ogden, piggyback service of the SP's Overland route to San Francisco is already handling some through traffic to points in Utah, Wyoming, Idaho and eastern Oregon. The SP also operates t-o-f-c service eastward from Los Angeles to Yuma, Ariz., Phoenix, and Tucson, but there is as yet no connection with its piggyback operations in Texas and Louisiana.

Post Office Superintendent Defends Rail Service

Charges that Chicago's "great rail bottleneck slows the entire transcontinental postal system," have brought forth prompt denial from a representative of the Post Office Department.

Speaking at the annual meeting of the Parcel Post Association, John M. Redding, consultant to the Independent Advisory Committee to the Trucking Industry and former assistant postmaster general, said an "artificial rate structure—which had kept railroads alive as mail carriers in hauls up to 300 miles" was withdrawn, leaving railroads "dead" in that field.

Citing "holes" in the transportation picture "even in areas where progress has been made," Mr. Redding characterized Chicago as "one of the great rail bottlenecks." He said "bulk mails arrive from New York in the morning—not early—and theoretically connect with afternoon departures the same day for the west coast. Actually the connection is too brief and these mails lay over until the following day, thus incurring about a 30-hour delay. The

department has been studying this problem for years but has, as yet, been unable to solve it."

Denial—This statement, when it appeared in print, brought a prompt and vigorous public denial from Virgil Jones, general superintendent of postal transportation. He pointed out that most East Coast mail arrives in Chicago in the afternoon and that principal westbound mail trains depart late in the evening.

"Santa Fe's No. 7, leaving at 11:55 p.m., can be made with mail that doesn't hit Chicago from the East until 4 p.m., and later trains follow often enough to take later arrivals. We clean up the town on those night trains," he stated. Rail service is frequent enough so mail layover is nothing like Mr. Redding charged; and eight hours is enough to unload from eastern trains and get mail aboard west coast trains, Mr. Jones added.

Law & Regulation

Mitchell Would End "Petty Regulation"

ICC chairman says commission is not dealing with "crooks, grafters, or racketeers," but with "respected and honest" businessmen—Calls again for up-to-date regulatory system

Because "we are not dealing with crooks, grafters, or racketeers," Chairman Richard F. Mitchell of the Interstate Commerce Commission would have the commission end what he calls "petty regulation."

Mr. Mitchell made this statement in an address prepared for delivery January 28 before the board of governors of the Regular Common Carrier Conference, American Trucking Associations, at Miami, Fla. He defined "petty regulations" as "small things—neither helpful to the industry nor to regulation, but troublesome and expensive."

Small Things—More specifically, the commission chairman had in mind such matters as undue attention to expense accounts of carrier officers, and excess zeal on the part of the commission's Bureau of Inquiry and Compliance in giving much time and attention to preparing small cases for prosecution. "The men engaged in the transportation business throughout the country are respected and honest businessmen," Mr. Mitchell said.

He went on to refer to a case wherein the allegation was that a trucking company, grossing $19 to $20 million a year, had been guilty of wilfully overcharging $41. The chairman thought the matter should have been taken up with the officers of the trucking company, but he found that the commission's investigator "pats himself on the back because they did not realize what he was checking."

Cases Lost—"It is this kind of investigation that I am opposed to," Mr. Mitchell continued. He went on to say that the courts seem to agree, because: "During the past eight years, in the seven occasions the railroads and shippers have been charged in court and in which they entered a plea of not guilty and stood trial, the court and the juries have brought in a verdict of not guilty and held against the commission in every single case."

Meanwhile, the chairman had restated his previously expressed views as to desirable changes in the Interstate Commerce Act. In that connection, Mr. Mitchell favors repeal of section 22 and of the reparations provision; tightening the so-called agricultural exemptions to limit exempt trucking to "the primary movement from the farm to the market of the farmers', livestock raisers' and fishermen's own products"; and elimination of the exemption covering transportation by water of commodities in bulk.

Repeal of taxes on amounts paid for for-hire transportation is also advocated by Mr. Mitchell, and he would end the right of another government department (like Agriculture) to litigate orders of the commission. Within the commission itself, the chairman favors eliminating the railroad waybill study, which he called an "expensive luxury."

Free Regulated Carriers—As to the problem of private-carrier competition with for-hire operators, Chairman Mitchell warned that "regulation must be so changed that regulated transportation companies, both truck and rail, are permitted to compete with the private carrier under the same existing conditions as the private

MITCHELL SAYS SEVERE RAIL RATE WAR IS PENDING

"Today we have pending one of the most severe and dangerous rate-cutting wars we have ever had. It is rail against rail, and the outcome may seriously affect certain of the rails."

That's what Chairman Richard F. Mitchell of the Interstate Commerce Commission said in an address prepared for delivery January 28 before the board of governors of the Regular Common Carrier Conference, American Trucking Associations, at Miami, Fla.

The commission chairman did not elaborate on these statements, but as to competitive rate cutting by railroads and truckers, he had this to say:

"There is no justification for this war which is going on between rails and trucks. It should end. Neither rails nor trucks are 'lily-white.' Both segments should work to build a better transportation system capable of properly serving the nation."

CANADIAN NATIONAL PASSENGER REPRESENTATIVES from principal cities in the eastern U.S. as they met recently in New York to discuss the road's 1955 advertising campaign in this country. Left to right, seated, are A. L. Sauviat, assistant director of public relations in charge of advertising; F. K. Moore, general passenger agent, New York; and C. H. Ladue, general agent, Boston. Standing, in the same order, are C. V. Howick, A. F. Knauer, Earl Eastwood, F. S. Benoliel and L. H. Brooks, general agents, at, respectively, Buffalo, Pittsburgh, Washington, D.C., Philadelphia and New York.

carrier is permitted to operate." Later on he had this to say:

"What we are interested in is the building of a transportation system which will be able to serve the nation both in peace and in war. You could not build an adequate transportation system upon the exempt carrier, the private carrier, or the contract carrier. Changes in regulation must keep pace with the changes in transportation . . . But I want no one to be misled. Regulation is absolutely necessary and should be continued. Eliminate all these old laws and interpretations and bring it up to date, is my plea. I am convinced that if there were no regulatory body to control rates it would not be long before various segments of the industry would drive other segments out of business."

Then came Mr. Mitchell's comment on rate wars, as set out in the accompanying "box." He went on to endorse statements about the commission's "new look" which were made recently by Commission Owen Clarke (*Railway Age*, January 24, page 8).

As to the commission's internal organization, Chairman Mitchell expressed some doubts about benefits of bureau consolidations. At the same time, he thinks the commission could do much to improve its procedures and expedite its work. He said: "Let's shorten the reports; let's shorten the hearings; and let's eliminate those protestants who enter the case simply to delay."

SEABOARD AIR LINE'S new $8½-million yard at Hamlet, N. C., was dedicated January 31 in a ceremony attended by President J. W. Smith, directors of the railroad, and Gov. William Umstead of North Carolina. The 4.5-mile-long facility, which took 18 months to build, features a 59-track classification yard (1,280 cars), as well as a new diesel shop, car shop, power plant and yard offices. Automatic retardation is provided at master and intermediate retarders; the yardmaster, with windows on all sides of his office, commands a view of the entire yard; and complete communications, including yard radio on locomotives, intercoms, talk-back and paging loudspeakers, automatic dial telephones and pneumatic tube systems, are provided. The yard has actually been operating about 60 days.

Congress Asked to Raise Postal Rates in 4 Classes

In line with President Eisenhower's announced desire to put the Post Office Department on a self-sustaining basis, Postmaster General Summerfield has proposed rate increases which he says would provide $340.5 million in additional annual revenues.

The increases would affect first, second and third class and air mail, with the largest source of added revenue coming from a one-cent rise in the first-class rate.

First-class (three-cent) mail would go for four cents, and the air mail rate would also go up one cent, under the proposals. Second-class mail, mainly newspapers and magazines, would undergo two rate increases of 15% each to be applied in successive years.

The Post Office Department stated that it is now operating at a loss of between $300 and $400 million a year, not considering wage and other benefits for postal employes that are expected to cost an additional $170 million annually.

The first-class rate increase would raise revenue by $237 million, the Post Office stated, and noted that "at least 75% of all letter mail originates in business," with the result that business will bear most of the increase. The air mail boost will produce annually $14 million extra, the second-class increases about $16.5 million during the next two years and the third-class rise approximately $73 million a year, the Post Office anticipated. These rate increases are part of a multi-phase program recommended to Congress by the President (*Railway Age*, January 17, page 6) as a means to get the Post Office out of the red.

BRT Backs Railroad Rate-Freedom Program

The Brotherhood of Railroad Trainmen has announced that it would "go down the line with the nation's railroads on their request for a freer hand in rate-making."

In a January 26 statement issued in Washington, D. C., BRT President W. P. Kennedy said it was "unrealistic and unfair for the carriers to be burdened with certain . . . rate-regulatory policies which were determined 60 or 70 years ago and which do not permit the railroads to cope adequately with today's competitive or general economic conditions."

Wage Problems—At the same time, Mr. Kennedy said the BRT "expected the carriers to deal more fairly and realistically with wage problems . . . and grant more speedily justified concessions instead of dragging pay and working condition cases out *ad infinitum*."

Mr. Kennedy also said that BRT's support of the rate-freedom program "should not lead anyone to believe that we are for softening ICC regulation generally." He added:

"Safety matters, continuance of necessary and convenient freight and passenger service and slow and careful scrutiny of merger applications, all these must be regulated, probably more rigidly than they are at present. The carriers also want a freer hand in abandoning service and to engage in other forms of transportation, objectives to which the BRT is opposed."

Two Nominees Told To "Speed Up" ICC

The Senate Interstate and Foreign Commerce Committee took a dim view of the backlog of work before the Interstate Commerce Commission last week during a hearing on two nominees for the commission.

Neither nominee, Kenneth H. Tuggle, succeeding himself, or Everett Hutchinson, filling the unexpired term of Charles D. Mahaffie, was opposed and

the committee reported their names favorably to the Senate on January 26. The Senate confirmed them the following day. At the committee hearing they had been admonished to see if they could not "speed it up down there" or even assume the roles of "pike in a carp pond" in the words of Committee Chairman Magnuson, Democrat of Washington.

Senator Payne, Republican of Maine, made a statement in which he attacked "disproportionate geographic representation" on the ICC. He said he meant no criticism of either Mr. Tuggle, from Kentucky, or Mr. Hutchinson, a Texan, but protested that there will now be only one commissioner from the Northeast against four from the South, three from the Midwest, two from the Pacific Coast and one from the mountain states.

Senator Bricker, Republican of Ohio, said that Mr. Hutchinson is "succeeding one of the ablest men that ever served on the Interstate Commerce Commission." The senator said that Mr. Mahaffie, who retired December 31, 1954 (*Railway Age*, January 24, page 11), was "a real tower of strength down there in behalf of the regulatory system."

Senate and House Committees Named

Assignments of members to the new Congress' committees on interstate and foreign commerce have been approved by the Senate and House.

As had been anticipated, Senator Magnuson, Democrat of Washington, is chairman of the Senate committee, and Representative Priest, Democrat of Tennessee, is chairman of the House committee. Memberships of the two committees are as follows:

SENATE

Democrats:
Warren G. Magnuson, Washington, Chairman
John O. Pastore, Rhode Island
A. S. Mike Monroney, Oklahoma
George A. Smathers, Florida
Price Daniel, Texas
Samuel J. Ervin, Jr., North Carolina
Alan Bible, Nevada
Strom Thurmond, South Carolina

Republicans:
John W. Bricker, Ohio
Andrew F. Schoeppel, Kansas
John Marshall Butler, Maryland
Charles E. Potter, Michigan
James H. Duff, Pennsylvania
William A. Purtell, Connecticut
Frederick G. Payne, Maine

HOUSE OF REPRESENTATIVES

Democrats:
J. Percy Priest, Tennessee, Chairman
Oren Harris, Arkansas
Arthur G. Klein, New York
William T. Granahan, Pennsylvania
F. Ertel Carlyle, North Carolina
John Bell Williams, Mississippi
Peter F. Mack, Jr., Illinois
Kenneth A. Roberts, Alabama
Morgan M. Moulder, Missouri
Harley O. Staggers, West Virginia
Isadore Dollinger, New York
Walter Rogers, Texas
Martin Dies, Texas
Samuel N. Friedel, Maryland
John J. Flynt, Jr., Georgia
Torbert Macdonald, Massachusetts
Don Hayworth, Michigan

Republicans:
Charles A. Wolverton, New Jersey
Carl Hinshaw, California
Joseph P. O'Hara, Minnesota
Robert Hale, Maine
James I. Dolliver, Iowa
John W. Heselton, Massachusetts
John B. Bennett, Michigan
Richard W. Hoffman, Illinois
John V. Beamer, Indiana
William L. Springer, Illinois
Alvin R. Bush, Pennsylvania
Paul F. Schenck, Ohio
Joseph L. Carrigg, Pennsylvania
Steven B. Derounian, New York

Other committee assignments include that of Senator Lister Hill, Democrat of Alabama, as chairman of the Senate Committee on Labor and Public Welfare. He succeeded Senator H. Alexander Smith, Republican of New Jersey, who is now the committee's ranking minority member. This committee handles all labor and social security matters, including those relating to the railroad retirement and unemployment insurance systems.

Safety

Safety Violations Rose in '54

ICC rail safety section urges stiffer fines for infractions, to spur roads to "more effective measures"

The annual report of the Interstate Commerce Commission's Section of Railroad Safety, Bureau of Safety and Service, includes a recommendation that the penalty for violation of safety appliance acts be increased from $100 to $500.

The recommendation follows a report on the section's inspections of safety appliances and train brakes—investigations which showed increased percentages of defective equipment compared with the previous year. This showing, the report declares, "indicates a decrease in necessary inspection by railroads."

The report, submitted by C. W. Taylor, acting director of the bureau, advocates that "consideration should be given to recommending to Congress that the penalty for violation of safety appliance acts be increased. The present penalty of $100 for each violation was established more than 50 years ago. Taking into consideration the present-day value of the dollar, a comparable penalty would probably be $500 or more, and an increase of the penalty to that amount would no doubt cause many railroads to take more effective measures to comply with the law."

More prosecutions of safety violations also were reported, the total being 221 cases comprised of 713 counts for the year ended June 30, 1954. With 268 counts pending at the start of the year, the report states, judgment was confessed in 638 counts, four were dismissed and four, being tried, resulted in judgments for the government.

The commission itself, in its own annual report to Congress, made no recommendation such as was suggested by Mr. Taylor.

The safety section reported that its inspections revealed 50.85 safety defects for each 1,000 locomotives and cars inspected, as contrasted with 43.21 per 1,000 in 1953. The number of locomotives and cars inspected was 1,405,793, with 4.34% defective. A total of 1,347,710 freight cars, 42,342 passenger-train cars, and 15,741 locomotives were inspected, as against 1,253,590 freight cars, 38,115 passenger-train cars and 14,303 locomotives in the previous fiscal year.

More Defects—The total percentage of defective freight cars last year was 4.38 compared with 3.68 in 1953; of the passenger train cars and locomotives inspected last year 3.69% and 2.26% were defective, respectively, as against corresponding figures of 3.41% and 1.97% for 1953.

In the section's inspections of train brakes, the report states, 2,978 trains consisting of 138,302 cars were tested prior to departure from terminals and 99% of the cars were found operative. Tests were made on 1,684 trains arriving at terminals with 98.2% of the 98,005 cars tested found to be operative.

However, the report continues, "to procure the percentage of operative brakes (on departing trains) . . . 3,557 cars having defective brakes were set out and brakes were repaired on 4,865 cars remaining in trains. These trains had been prepared for departure, yet when . . . . tested by our inspectors . . . an average of 2.8 cars per train" had to be set out or repaired.

Hours of service reports filed by 626 roads, Mr. Taylor discloses, showed 146 roads having a total of 5,055 instances of excess service, a decline of 1,491 from the previous year. The remaining 480 roads reported no excess service.

Collisions investigated by the safety section totaled 39, with 27 on lines operated by the block system (only one of these being a non-automatic system); six on timetable and train-order lines, and six where yard and miscellaneous operating rules were in effect.

As of January 1, 1954, the report noted, there were 65 roads using train communications systems over 61,743 miles of road. Of this, railroad operating systems were used over 55,762 miles of road, and commercial radio-telephone facilities and end-to-end train communication systems over 5,981 miles.

The report shows that there were 79,630 miles of road (110,404 miles of

track) equipped with automatic block signals and 30,559 miles of road (31,955 miles of track) equipped with non-automatic block signals as of the first of this year. On the same date there were 4,315 interlockings in operation and 13,886 miles of road (25,391 miles of track) equipped with automatic train-stop, train control and cab-signal devices.

The report states that it seems "feasible" that "minimum regulations" might be adopted as to labeling, billing and classification of explosives and other dangerous articles for transportation.

In Congress

Bills in Congress

Bills introduced in the new Congress which convened January 5 have included many which propose legislation of interest to railroads. Generally, however, they do not embody new proposals. They revive bills which were before previous Congresses but failed of final enactment.

Bigger Seaway—Proposals to build a bigger St. Lawrence seaway than that approved last year were new—but not unexpected. One of several seaway bills is S.171, introduced by Senator Wiley, Wisconsin. Like the others, which include both House and Senate bills, it would authorize construction of a 27-ft channel above Lake Erie.

The project approved last year authorizes U.S. participation with Canada in work confined to the International Rapids and Thousand Islands sections of the St. Lawrence. His present bill, as Senator Wiley put it, would "help complete" the seaway which was "begun" under the 1954 legislation.

Section 22 Bill—Senator Bricker, Ohio, former chairman and now ranking minority member of the Senate Committee on Interstate and Foreign Commerce, is sponsor of a bill, S.543, to prevent the government from filing complaints assailing special rates granted by carriers under Section 22 of the Interstate Commerce Act. Similar legislation was passed last year only to be vetoed by President Eisenhower. "The veto message has been complied with" in S.543, Senator Bricker said when he introduced the bill.

Other proposals include several bills to prohibit discrimination in interstate transportation and in employment; also, several bills to raise the minimum wage, which is now 75 cents per hour. Most of the new bills propose $1.25 but some propose $1 and one would put it at 90 cents, the recommendation of President Eisenhower. Congress also got a normal crop of superhighway bills.

Other bills of interest to railroads are listed below, together with their sponsors.

Introduced in House—H.R.73, to readjust size and weight limitations on fourth-class parcel post (Broyhill, Va.).

H.R.163, to require railroads to install train communication systems (Price, Ill.).

H.R.182, to liberalize age-of-retirement and minimum-annuity provisions of the Railroad Retirement Act (St. George, N. Y.).

H.R.232, to amend the Civil Aeronautics Act to exempt from regulation the transportation by air of agricultural products, livestock, fish and horticultural commodities (Younger, Cal.).

H.R.293, to adjust size and weight limits on parcel post (Van Zandt, Pa.).

H.R.295, to amend the Civil Aeronautics Act to permit the granting of free or reduced-rate transportation to ministers of religion (Wickersham, Okla.).

H.R.306, to amend the Railroad Retirement Act to provide for retirement with full annuity after 30 years of service (Wickersham, Okla.).

H.R.428, to establish quota limitations on imports of foreign residual fuel oil (Fenton, Pa.).

H.R.438, to authorize construction, operation and maintenance of heliports on or near government buildings (Hinshaw, Cal.).

H.R.525, to remove federal, state, and local governments from the list of those eligible to receive free or reduced rate transportation under section 22 of the Interstate Commerce Act (Hinshaw, Cal.).

H.R.650, to give shippers the right to route freight transported by motor carriers (Davis, Wis.).

H.R.738 and H.R.757, to eliminate provisions of the Railroad Retirement Act and Social Security Act which restrict the right of a spouse or survivor to receive benefits simultaneously under both acts (Williams, Miss., and Cunningham, Iowa).

H.R.760, to amend the Railroad Retirement Act (Cunningham, Iowa).

H.R.778 to provide that each member of the bar of the highest court of a state or of a federal court shall be eligible to practice before all administrative agencies (Keating, N. Y.).

H.R.845, to reduce the rate of tax on transportation of property (Scudder, Cal.).

H.R.856, to liberalize the Railroad Retirement Act's age-of-retirement and full-annuity provisions (Van Zandt, Pa.).

H.R.857, to amend the Railroad Retirement Act (same as H.R.738—Van Zandt, Pa.).

H.R.858, to amend the Railroad Retirement Act to permit retirement with full annuity at age 60, after 30 years of service (Van Zandt, Pa.).

H.R.859, to increase benefit payments under the Railroad Retirement Act by 25% (Van Zandt, Pa.).

H.R.865, to repeal laws directing the ICC "to reform the classification, rates of postage, weights and size limits, zones and other conditions of mailability of fourth-class mail matter" (Van Zandt, Pa., "by request").

H.R.1574, to repeal the tax on transportation of persons (Hyde, Md.).

H.R.1611, to provide that the ICC may determine toll charges over certain bridges and tunnels crossing state lines (Sieminski, N. J.).

H.R.1772, to amend the Interstate Commerce Act to require establishment by motor carriers of through routes and joint rates (Boggs, La.).

H.R.1775, to establish quota limitations on imports of foreign residual fuel oil (Byrd, W. Va.).

H.R.2026, to amend the Railroad Retirement Act (O'Konski, Wis.).

H.R.2399, to amend the Interstate Commerce Act to require that freight cars and other unlighted railroad cars be equipped with "reflecting or luminous" material so that they can be "readily seen and identified at night from approaching motor vehicles" (Gross, Iowa).

H.R.2443, to amend the Railroad Retirement Act to permit an annuitant to

(Continued on page 14)

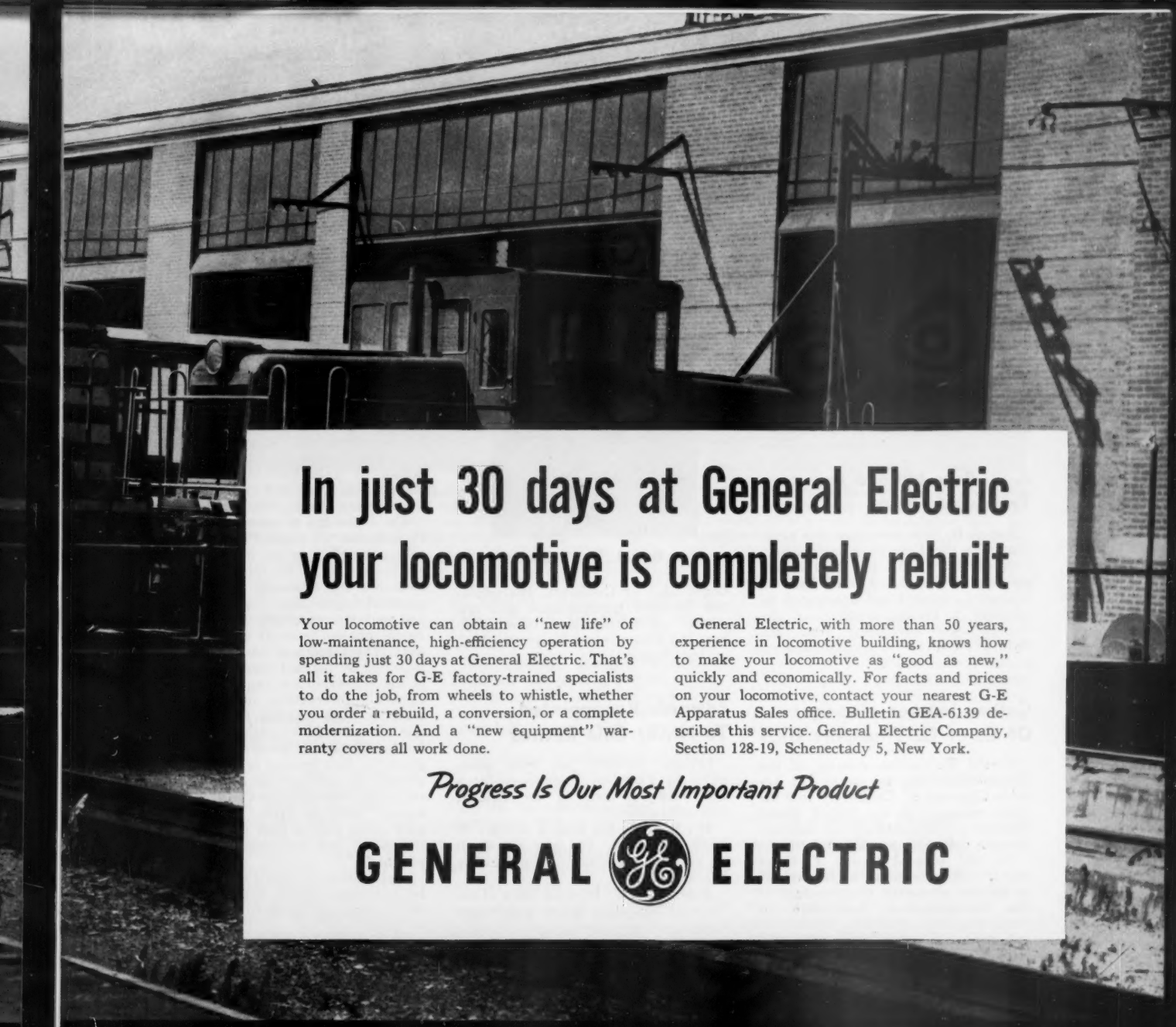
TEN RECTIFIER-TYPE high-speed electric passenger locomotives are currently being delivered to the New Haven by the General Electric Company. Power for their d-c traction motors may be received either from an 11,000-volt, 25-cycle overhead contact system through rectifiers, or from a 660-volt third rail. The units have a continuous rating of 4,000 hp, with an axle loading of 58,000 lb, which is limited by the viaduct over which they must operate along Park Avenue, in New York City.

THOROUGH CLEANING

1. To remove dirt and grime accumulations, locomotive assemblies are steam-cleaned, and, if necessary, shotblasted. This facilitates careful inspection and reconditioning.

COMPLETE REPAIR

2. Everything is checked. For example, if cracked welds are detected, they are chipped out, and the area re-welded. General Electric overhaul-rebuild service pays particular attention to detail.



In just 30 days at General Electric your locomotive is completely rebuilt

Your locomotive can obtain a "new life" of low-maintenance, high-efficiency operation by spending just 30 days at General Electric. That's all it takes for G-E factory-trained specialists to do the job, from wheels to whistle, whether you order a rebuild, a conversion, or a complete modernization. And a "new equipment" warranty covers all work done.

General Electric, with more than 50 years, experience in locomotive building, knows how to make your locomotive as "good as new," quickly and economically. For facts and prices on your locomotive, contact your nearest G-E Apparatus Sales office. Bulletin GEA-6139 describes this service. General Electric Company, Section 128-19, Schenectady 5, New York.

Progress Is Our Most Important Product

GENERAL ELECTRIC

CONTROL SYSTEM RENEWED

3. **The entire control system** is tested and repaired. Wiring, contact tips, and wearing parts are replaced as required. This inspection helps assure long service at minimum maintenance expense.

POWER EQUIPMENT OVERHAULED

4. **The Diesel engine,** generator, traction motors and auxiliary equipment are reconditioned so thoroughly you regain "original" performance. Many modernizations are also available.

(Continued from page 11)

receive an annuity even though he renders compensated service for the "outside" employer by whom he was last employed before his annuity began to accrue (Van Zandt, Pa.).

H.Res.18 and H.Res.33, to create select committees to investigate the Civil Aeronautics Board and the subsidies paid by the federal government (Boggs, La.).

Introduced in Senate—S.61, to repeal laws authorizing the postmaster general, with the consent of the ICC, to revise parcel post rates, size and weight limits, zones, etc. (Johnston, S. C.).

People in the News

J. D. Ryle Named to Transitads Post

Joseph D. Ryle, executive vice president with the Federation for Railway Progress since 1952, has been named assistant to the chairman of National Transitads, Inc., it was announced by Edmund J. Frazer, president of the transportation advertising firm. Mr. Ryle will continue to serve on the executive council of FRP.

Collins Named Manager Of C. of C. Transport Unit

Gerald W. Collins, director of the Transportation division of the Los Angeles Chamber of Commerce, will become manager of the United States Chamber's Transportation and Communication department on February 15.

He will succeed Harold F. Hammond, who resigned as of January 15 to become executive vice-president of the Transportation Association of America (*Railway Age*, December 13, 1954, page 71). Mr. Collins has been in his present position with the Los Angeles chamber since 1951.

Prior to that time he was a rate specialist with the Public Utilities Commission of California. His education included transportation and law courses at Metropolitan Junior College and Southwestern University, both in Los Angeles.

Gerald W. Collins

Edwards Reappointed To NMB; Cole Retires

Leverett Edwards has been nominated by President Eisenhower for a new three-year term on the National Mediation Board.

Mr. Edwards has been a member of NMB since 1950. The term for which he has been reappointed would expire February 1, 1958.

Robert F. Cole, head mediator of the National Mediation Board and former secretary of the board, retired January 16. Mr. Cole had served continuously since 1920 with NMB and its predecessors, which included the U. S. Railroad Labor Board and the U. S. Board of Mediation.

Education

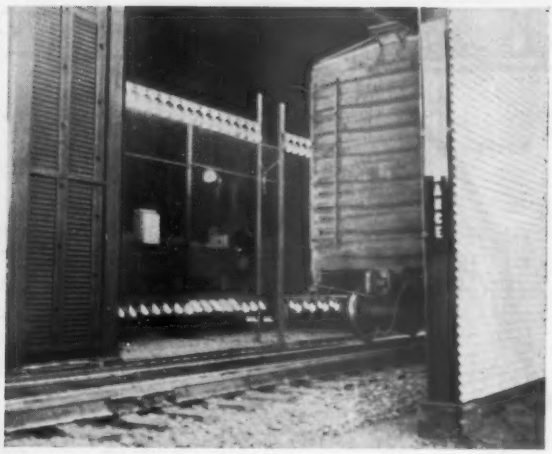
Strathcona Fellowship Renewed at Yale

A $1,500 Strathcona Memorial Fellowship, providing for a year's study of transportation in the Graduate School of Yale University, is being offered this year for the first time since before World War II.

The fellowship is open to graduates of approved universities and colleges, and is awarded on the basis of financial need and of individual merit, as measured by scholastic performance, practical experience, if any, and general evidence of ability in the candidate's chosen field of transportation work. The breadth of possible fields is indicated by the fact that past holders of the fellowship are engaged in management, government, industrial and teaching posts relating to transportation. In accordance with the will of Lord Strathcona, preference will be given "to such persons or sons of such persons as shall have been for at least two years creditably connected in some manner" with the Great Northern, "regard being had in each case solely to the merits and necessities of the applicant."

Applications for the fellowship should be addressed, before February 15, to the Director of Administration, Gradu-

OLDTIME SHAY LOCOMOTIVE plays a prominent role in Republic Pictures' new film, "Timberjack." The locomotive, loaned to Republic by the lumber department of the Anaconda Copper Company, was manufactured by the Willamette Iron & Steel Works, Portland, Ore. The new film is a drama of the Northwest timberlands.



TELEVISION AT POTOMAC YARD *(Railway Age,* **January 24, page 10) permits numbers and initials of cars in inbound trains to be recorded in the yard office as the cars themselves move through a lighted shed, two miles away, where the TV cameras are located. The new installation, result of two years of research and testing, is expected to save about 40% a year on its original cost, by expediting classification of cars and processing of waybills.**

ate School, Yale University, New Haven, Conn., on blanks which may be obtained from him. The Graduate School's catalog lists courses offered in transportation.

Four Scholarships for Sons of PRR Employees

The Pennsylvania has announced that four Frank Thomson Scholarships, instead of one, will be awarded annually, beginning this year. The original scholarship, providing financial assistance for a four-year technical education, was established in 1907 in memory of Frank Thomson, sixth PRR president, by his children. Miss Anne Thomson, daughter of Mr. Thomson, died recently, making a substantial bequest to the trust fund, which permitted an increase in the scholarships.

Two scholarships will be valued at $1,400 each and the other two at $800. Winners of tests for the scholarships will be entitled to a course in engineering studies at an approved school of their choice. Information is available from the College Entrance Examination Board, Box 592, Princeton, N.J. Deadline for filing an entry application is February 12.

Equipment & Supplies

FREIGHT CARS

The **Central of Georgia** has ordered one 50-ton box car from the Pullman-Standard Car Manufacturing Company at an estimated cost of $6,088.

The **Chicago Great Western** has ordered 15 19,000-gal tank cars from the General American Transportation Corporation at an estimated cost of $175,000.

The **Chicago Heights Terminal Transfer** has ordered 100 50-ton box cars from ACF Industries at an estimated cost of $685,000. Delivery is scheduled for next April.

The **Great Northern** has ordered 25 70-ton gondola cars from its own shops at an estimated cost of $215,000. Delivery is scheduled for the last quarter of 1955.

The **Milwaukee** has ordered 50 50-ton box cars from the Pullman-Standard Car Manufacturing Company.

The **New York Central** has reinstated an order for 850 box cars placed last year (*Railway Age*, February 1, 1954, page 28), with Despatch Shops, Inc. Last year's order, for 2,500 box cars, was later reduced by 850 units.

The **Santa Fe** has ordered 500 50-ton box cars from ACF Industries, and 50 70-ton refrigerator cars from its own shops.

The **Seaboard Air Line** is fabricating in its Portsmouth (Va.) shops two 125-ton depressed center flat cars at a cost of about $32,000 each, for special shipments, such as transformers and unusually heavy machinery. Each car will be 58 ft long with a depressed center section 21 ft long and two feet above the rails. The cars will have trucks wtih six 30-in. rolled steel wheels. Trucks and cast steel bodies will be manufactured by the General Steel Castings Corporation at Eddystone, Pa. Delivery is expected on both cars in May.

The **Transportation Materiel Command** has ordered 202 10,000-gal tank cars from ACF Industries at a unit cost of $6,400. Deliveries are scheduled to start next April and be completed in July.

The **Union Tank Car Company** has ordered 200 10,000-gal tank cars from its own shops for delivery during the first half of the year.

LOCOMOTIVES

Class I Roads Install 1,113 Locomotives in 1954

Class I railroads put 1,113 new locomotive units in service during 1954, compared with 2,110 in 1953, the Association of American Railroads has announced. Installations last year included one steam locomotive, 15 gas turbine-electric locomotives and 1,097 diesel-electric units, while 1953 installations included 15 steam and four gas turbine-electric locomotives and 2,091 diesel-electric units.

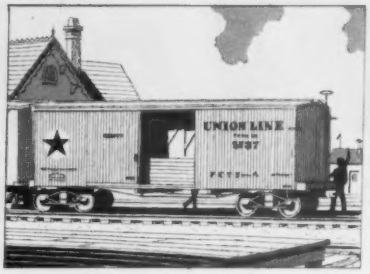
December 1954 installations by Class I railroads included 89 diesel-electric units and one steam-turbine-electric locomotive, the announcement said, compared with December 1953 installations of one steam locomotive and 119 diesel-electric units.

On January 1, Class I roads had on order 483 diesel-electric units and 10 electric locomotives, compared with 546 diesel-electric units and 10 electric and 15 gas turbine-electric locomotives on order January 1, 1954.

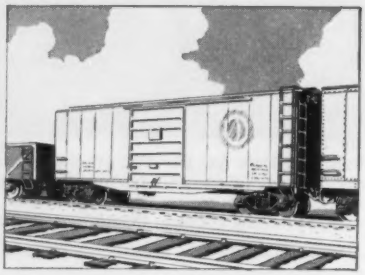
The **Grand Trunk Western** has ordered seven 1,200-hp road-switchers from the Electro-Motive Division of General Motors Corporation (for delivery about April 1), and two 1,000-hp switchers from the American Locomotive Company (for delivery in January).

(Continued on page 35)

Time proves... Nailable Steel Flooring cuts railroad costs



At the turn of the century, when cars were mainly constructed of wood, frequent shopping for repairs was necessary.

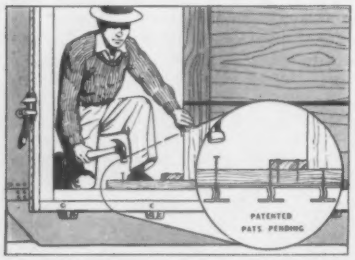


Steel was progressively used to give cars more strength and durability. An important part, the floor, was by-passed.

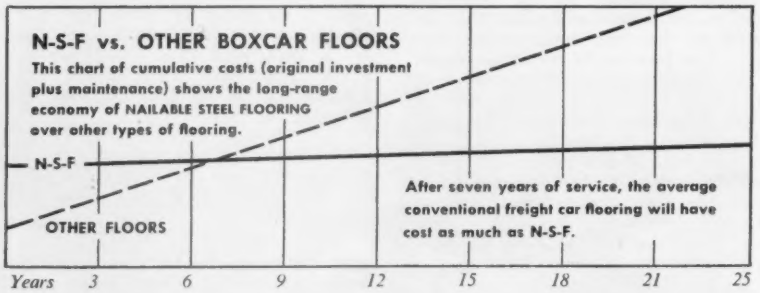
Some freight must be secured by blocks nailed in place, so that the nailability of wood kept it in use for car floors.

But such floors require frequent maintenance, increase operating expenses, and cut revenue earning potential. (See chart.)

N-S-F provides a positive means to cut maintenance costs and improve car supply —another forward step with steel.



N-S-F channels are made of low-alloy N-A-X HIGH TENSILE steel welded together to form a unique nailing groove. Nails are gripped tightly to improve blocking security, yet can later be readily removed.


N-S-F vs. OTHER BOXCAR FLOORS
This chart of cumulative costs (original investment plus maintenance) shows the long-range economy of NAILABLE STEEL FLOORING over other types of flooring.
N-S-F
OTHER FLOORS
After seven years of service, the average conventional freight car flooring will have cost as much as N-S-F.
Years 3 6 9 12 15 18 21 25

COMPLETE engineering and cost data available from Great Lakes Steel Corporation, Steel Floor Division, Ecorse, Detroit 29, Michigan. Sales representatives in Chicago, Philadelphia, St. Louis, Atlanta, Omaha, Denver, San Francisco, Montreal, and New York.

Like many improvements, NAILABLE STEEL FLOORING costs more initially than the material it supplants. But substantial savings in maintenance begin immediately and its cost is progressively reduced.

So an investment in N-S-F helps to improve operating ratio and pays off handsomely over a long period. It's easy to see why NAILABLE STEEL FLOORING is already in use in over 18,000 cars owned by more than 55 railroads.

GREAT LAKES STEEL CORPORATION
UNIT OF
NATIONAL STEEL CORPORATION

NAILABLE STEEL FLOORING

PAVES THE WAY TO THE ALL-STEEL FREIGHT CAR

Technological Progress, Alone, Is Not Enough

Credit for the enormous improvement in the material standard of living which has occurred on this continent in the past two or three decades is usually given to scientists and engineers. The esteem they have won is justified—but there are other important contributors to this result whose accomplishments have gone largely unnoticed. In the forefront among them are those people who—for want of a more adequately descriptive term—are called "merchandisers" or "marketing experts."

Consider, for instance, the so-called "supermarkets"—and the contribution they have made to the improved quality of available consumer's goods, at moderate prices. Can there be any doubt that the competitive effect of these modern stores has contributed as much to improved living standards as the technological improvements in food processing?

The point is that, in most industries, the people with the sharp pencils who work at attractive pricing—and the expense-cutting necessary to make such pricing possible—have been just as productive as the scientists and engineers. The share such people have had in supplying more and better products, at prices people will pay, has been comparable to the effort of the technologists toward the same goal.

Probably the outstanding example of the price-maker's art (as well as that of the engineer and production expert) is automobile transportation. Something like half of the capital cost of providing automobile transportation is represented by the investment in highways; and payment for highways has been so contrived that the motorist pays most of this cost whether he uses the highways or not. (That is, a large part of the cost is defrayed by general taxation, a condition which is magnified by the exemption of highway property from *ad valorem* taxes. Then, a part of highway use fees is collected in license charges—which cost just as much whether a car is driven 100 miles or 30,000 in a year.) The result is that motorists (i.e., practically everybody) incur only a little more of the *highway part* of their expense when they drive their cars, than they do if they leave their cars in the garage. Moreover, once a car has been purchased, its capital cost has been paid—and is the same whether the car is driven much or little.

A more ideally effective pricing system to induce maximum use of automobiles could scarcely be imagined. The intensive use of automobiles thus encouraged has made possible mass production methods which, in turn, have reduced the *vehicle part* of automotive transportation costs. Today's automobiles seem almost miraculous—in the amount of intricate and high-grade machinery made available at modest cost. But the technologists could not have provided so much value at so moderate a price, except for the mass demand so largely engendered by the pricing policy followed for highway service.

Most prosperous businesses base their prosperity on contriving pricing "gimmicks" which stimulate demand—and hence make possible the steadily increasing savings of mass production through greater mechanization. And greater mechanization, in turn, enlarges the opportunities for more price-reduction experiments to induce still greater demand. And so on—each hand washing the other.

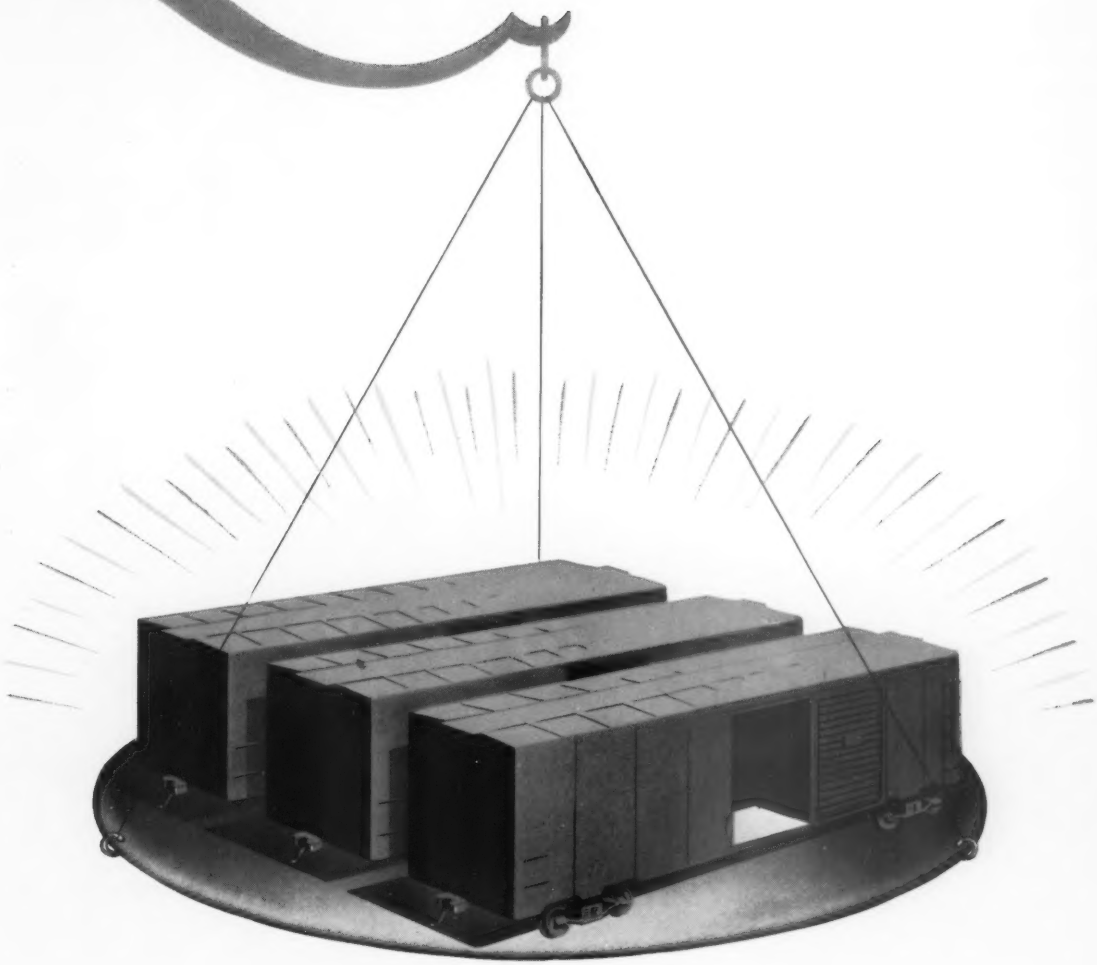
One of the union publications recently took a crack at this paper for calling attention to the tendency toward so-called "automation"; and for suggesting that the railroads, if unduly handicapped by union policies, might be subjected to competition from rivals applying the "automation" principle. The union paper interpreted this observation as unfriendly to railway labor—which was the exact opposite of our intention. It is not an unfriendly act to anybody around the railroads—whether owners, management, labor, or suppliers—to call their attention to the fact that railroad transportation is now living in a ferociously competitive environment; and that, to survive, the industry must adapt its behavior to meet and overcome this competition. It is not pleasant, but it is necessary, to face the facts.

Other industries grow and prosper in this competitive environment because they have revised their actions to conform to the reality which surrounds them. Any influence—whether it be tradition, or regulation, or union policy—which holds the railroads back from similar adaptation of their methods to conditions of 1955, is an influence which should be modified.

Railroads have enormously benefited in recent years from the adoption of improved technology. But technology is only part of the reason for modern industrial progress and prosperity. The other part is marketing and pricing policy.

HOW MANY NEW CARS COULD YOUR OLD CARS BUY?

Look at it this way.
It's a fact that old freight cars demand far more maintenance than new equipment.
It's a fact... they have far less earning power because of excessive out-of-service periods for repairs.
It's a fact... they result in an extra high amount of freight claims.
And so... the tremendous savings made possible by timely replacements would equal the cost of *plenty* of new freight cars.



HOW MANY NEW CUSTOMERS WOULD YOUR NEW CARS GET?

According to the happy experience of other railroads... you'll get *plenty* of new customers, too. Not simply because of faster service... less damage. Shippers are just naturally attracted by the efficient "look" of new equipment.

Why not call in your nearby ACF Representative and learn about the extra advantages of ACF Freight Cars?

ACF Industries, Incorporated, New York • Chicago • St. Louis
Philadelphia • Washington • Cleveland • San Francisco

acf **CAR BUILDERS TO AMERICA'S RAILROADS**

Questions and Answers FOR THE TRANSPORTATION DEPARTMENT

In a case like this, which is the best method for utilizing power and crews?

A trainmaster writes: "Two-unit locomotives normally handle 7,500 gross tons from 'A' to 'C,' 130 mi. 'B' is 20 mi north of 'A' and has a full train of 5,000 tons to move south to 'A.' Three methods are usually employed to move the 5,000 tons to 'A':

"(1) Two additional units of diesel power are doubleheaded with a through train. These units are not operated in multiple. A deadhead caboose and train crew also accompany the train. At 'B' the second pair of diesels are set out, the train crew is put on duty, and handles a train back to 'A.' A yard engine is necessary at 'B' to switch out the deadhead caboose, which must be cut in ahead of the through train's caboose. A delay of 30 min results to the through train.

"(2) The same as (1) except that the additional two units are connected and operated in multiple. The through train consists of a four-unit locomotive 'A' to 'B.' A full crew deadheads with the train to 'B.'

"(3) Two units operated in multiple run a caboose light to 'B,' from which point they return to 'A' with the 5,000-ton train.

"The problem is: First, which is the most economical method; second, which produces the most favorable operating statistics; and third, how to account for locomotive-miles, train-miles, hours of crew time earned, crew time and/or mileage paid, etc.?"

•

CONDUCTED BY G. C. RANDALL, district manager, Car Service Division (ret.), Association of American Railroads, this column runs in alternate weekly issues of this paper, and is devoted to authoritative answers to questions on transportation department matters. Questions on subjects concerning other departments will not be considered, unless they have a direct bearing on transportation functions. Readers are invited to submit questions, and, when so inclined, letters agreeing or disagreeing with our answers. Communications should be addressed to Question and Answer Editor, *Railway Age*, 30 Church Street, New York 7.

Here are two answers to the question:

"This is not difficult to answer from a theoretical standpoint. Whether or not the answer will be applicable to a given situation, however, will depend upon a number of factors which have not been stated in the question and which are most important in actual practice. I have in mind information regarding number of cars involved and tonnage per car, from which can be determined the train length; grades; home terminal of crews; availability of power, and other similar operating data.

"In my opinion, the most efficient way of handling this situation is different from any solution suggested. Assuming no physical obstacles exist and that there are sufficient power units available at 'C,' the most economical method to move the 5,000 tons from 'B' to 'A' would be to use three or four units in multiple 'C' to 'A' and returning to 'C,' filling out the train to 10,000 or 12,500 tons at 'B.' This would result in 260 unit-miles, with the only additional wage cost being in the rate paid to the engine crew on account of added units.

"Of the three methods suggested in the question, assuming that no overtime accrues to the through crew on account of the 30-min delay at 'B,' and further that the 40-mi round trip of road crew and locomotive from 'A' to 'B' and return to 'A' is made within eight hours, I think the suggested ways of doing the job would rate, in this order:

"*1. Method (3):* Wages of crew—100 mi (40 ordinary, 60 constructive); train-miles—20 ordinary and 20 light; locomotive-miles—40 principal; unit-miles—80 principal.

"*2. Method (1):* Same wage cost as in (3), plus 30-min delay to through crew, but minus whatever benefit might be derived from two additional units on through train 'A' to 'B.' Again the assumption is necessary that train crew, deadheading in caboose, and engine crew doubleheading, are paid 100 mi for round trip 'A' to 'B' and return. We would then have: locomotive-miles—20 principal and 20 helper; unit-miles—40 principal and 40 helper; and train-miles—20 ordinary.

"*3. Method (2):* Here it is assumed extra train and engine crews receive deadhead allowance 'A' to 'B,' starting service trip at 'B' and receiving 100 mi 'B' to 'A.' Through train engine crew receives higher rate for entire trip because of handling four units instead of two."—*W. G. White, vice-president—operation, Lackawanna.*

• • •

"The problem is silent concerning why a southbound train from 'C' en route to 'A' could not be used in some way to move tonnage from 'B'—which I assume is intermediate to 'A'—to 'A.' Presumably, extra units could be cut into a northbound train and be utilized southbound in moving extra tonnage from 'B' to 'A.'

"On the basis of the very limited information, it would appear method (3) is most economical. Assuming that a crew deadheading combines their deadheading with their working trip under the turnaround rule, and earns a day's pay for the total round trip, just as if it worked each way, there would be no wage saving by deadheading the crew, compared to working them light one way, and with a train southbound. Under method (2) there would be additional expense to the crew of the through train equal to the difference in rate of pay of a two-unit and a four-unit diesel. Further, wages of the crew deadheading would be the same as in (1) or (3). Increased train speed resulting from operating four units from 'A' to 'B' on the through train would tend to offset loss of time at 'B' setting units out. Method (1) would be quicker than (2) in that the lead pair of units could be the 'cut-off' crew and be got rid of more quickly at 'B.' The wage expense of (1) is the same as (3) but there is added yard expense and delay involved to the through train in method (1) or (2), compared to (3).

"Method (2) would produce most favorable operating statistics. Fewer locomotive-miles are involved in (2) than in either (1) or (3). Also, less train-miles are involved in (2) than in (3). Also, (2) produces more gross ton-miles per train and per train-hour, etc.

"In many situations an operation which favors better operating statistics will be less advantageous from an actual operating standpoint. In this example, the running of a light crew will permit the job to be done more quickly, and thus have the crew and locomotive available sooner. It will involve no delay to a through train, and actually will be a cheaper operation, yet from an operating statistic standpoint look less favorable."

	Loco.-miles	Train-miles	Mileage Paid
(1)	170	150	230 ea. crew member
(2)	150	150	230 ea. crew member
(3)	170	170	230 ea. crew member

—*G. M. Leilich, general superintendent, Western Maryland.*

GUIDANCE TO INDUSTRY AND AGRICULTURE IS . . .

Creating Tomorrow's Traffic

On the Frisco, traffic department representatives take a major role in helping the development department locate new industries on line—Other departments pitch in, too

When President Clark Hungerford came to the St. Louis-San Francisco in 1947, opportunities for locating industries on line had become badly limited in several major cities. There were few, if any, suitable sites for warehousing or for medium-sized industries. This was not a reflection upon the road's development department. It merely evidenced that these cities had become fairly well industrialized; that most Frisco-owned sites in and around them had been successfully sold or leased; and that a number of those remaining were being devoured by residential construction.

The outlook today is quite different. Since 1947 a total of 1,577 industries have been located adjacent to Frisco rails—bringing with them a plant investment of $167 million, new payrolls of over 41,000 employees, and an estimated annual tonnage of 231,853. But even more important than this is the fact that any industry can now obtain from the railroad fairly complete data on no less than 18 new major Frisco-developed sites. And preliminary development studies point to some 100 more such sites—new traffic potential for many years to come (and well scattered over the 5,000-mile system).

The Frisco's ability to come from being behind its would-be customers' needs to the position of being well ahead of them, is attributable to the enlarged and completely reorganized development department, which for the past 4½ years has been headed by J. E. Gilliland,

Part 8 of a series on CONTEMPORARY RAILROAD MANAGEMENT

This article continues an analysis of contemporary railroad management—its goals, methods and outlook—presented as a case history of the Frisco. The first article in the series appeared in the May 3, 1954, *Railway Age*.

assistant to the president at St. Louis. Recently H. A. Baker, assistant to the president at Memphis, Tenn., was named to succeed Mr. Gilliland, who was promoted to new responsibilities in the traffic department. Mr. Baker, active in development work prior to his new appointment, plans no important changes in the department's endeavors or its organization. He has, however, some interesting ideas of his own which are set forth elsewhere in this article.

Traffic Staff Is Key

When Mr. Gilliland was asked by President Hungerford to take over the development department in July 1950, the department was quite small. Besides the head, it consisted of two or three traveling men who worked to fill the locational needs of individual industries which came to light in a somewhat haphazard fashion through personal contacts.

Today, although the department is greatly enlarged, this contacting "legwork" is no longer the responsibility of its staff. Instead, a working arrangement has been set up whereby direct contact with industry is primarily the responsibility of on- and off-line traffic department representatives who, because of their greater number and wide geographic distribution, are able to bring in a very much broader and more complete picture of industries' plans and needs.

Relieved of this legwork, the department has been able to turn its attention to (1) processing "tips"and data received from the traffic men, (2) basic research in quest and development of new potential sites, (3) correlating the known requirements of an industry with sites that are suitable, and (4) conducting the final sales "pitch," negotiations, contractual arrangements, etc., when an individual industry is ready to relocate.

Wrote Their Own "Ticket"

"Because Mr. Hungerford wanted the most effective developmental organization possible, we have almost written our own ticket as to what was needed to reconstitute our work," Mr. Gilliland told *Railway Age*. "We wanted to have all of the necessary information available at our fingertips and not have to work our heads off getting it after some industry told us their wants.

"Our real job should be to create an interest in sites, not just to fill the needs of a few industries for them. Through our traffic men we now try to keep an eye on the dormant ideas of industry managements. We have learned that many industries decide to relocate rather suddenly. Usually it is a move on the part of a competitor that precipitates long-dormant plans. When that happens, we have to be ready with everything they want to know. Under our former set-up this was difficult to do because a decision to move was often the first tipoff we had."

Because every member of the traffic staff is automatically also a representative of the development department, traffic men are given periodic training in development matters. A properly trained traffic man, according to Mr. Gilliland, needs to be conversant with such matters as availability of fuel and water at a site, the extent and character of its acreage, its trackage, its access roads and the chemical nature of its water.

WATER: WHERE, HOW MUCH AND WHAT KIND, is the first order of business for the development department. Here J. E. Gilliland (seated), assistant to the president, checks over some of the department's water site reports to industry with E. A. Williams (left), director of development, and K. K. Keffer, research statistician.

He must also know the water and utility needs of a prospective industry, its sewage problems—especially chemical disposal—its truck dock requirements, its traffic pattern of raw materials and finished products (how much and in what directions), the location of its market, and its financial problems (as they might affect building and land ownership). Development of all of these informational factors is in the hands of Frisco traffic men. "When they are properly trained, these men are able to provide us with some of our most valuable leads," Mr. Gilliland stated.

On-line traffic staff men also keep the department posted on plant and warehouse vacancies within their territories. These are compiled in a bimonthly bulletin which is circulated to all members of both departments, to interested persons in other departments, to a prepared list of real estate agents, company real estate agents (of large firms), state development boards, and state and local chambers of commerce. Often these latter groups republish appropriate listings. While details vary with the individual listing (they may describe anything from a small job shop to an entire plant with many separate buildings) the following sample, taken from a recent bulletin, may be considered typical:

Hope, Arkansas.—The —— Warehouse Co., 315,700 sq ft available in five buildings, three of which are connected and separated by fire walls. Wood construction, composition roofing, wood floors. Floor loading approximately 250 pounds per square foot. Sprinklered throughout, low insurance rate. Electric, sewerage, water available. 14-ft ceiling heights. Suitable for warehousing, former cotton and compress warehouse. Available for lease in whole or in part, contact Mr. —— or this office.

From such listings, a traffic representative in Milwaukee, for example, may find a building suitable for a small local manufacturer he knows has been considering relocation. At the same time, the owner of the building in Hope gets a well-appreciated assist from the Frisco in finding a suitable tenant. A typical issue of the department's bulletin may list as many as 75 different

AFTER WATER, COAL AND ELECTRIC POWER will be chronicled throughout the nine-state Frisco territory for the development of more new industrial sites. Responsibility for much of this long-range undertaking falls to the department's industrial engineers, E. B. Wilkinson (left) and S. W. Frevert.

building vacancies—a fact which indicates both the degree to which Frisco traffic men are engaged in developmental work and the broad application of the bulletin itself.

Help from Other Departments, Too

"We have gotten help in our work from some departments which on other roads are often only dimly aware of the nature of development work," Mr. Gilliland said. As example he cited:

• *The Mechanical Department*—"During the course of conversion from steam to diesel power, they would keep us informed on abandonment of water stations and other buildings and properties which might conceivably be of use to an outside industry. We found that water stations provided ideal storage for industrial fire control systems and a number of industries have taken these facilities and put them to good use. In one instance, the mechanical department even volunteered to share a part of a still-active roundhouse with an outside industry —at some inconvenience to the department, I might add."

• *The Purchasing Department*—Local fuel storage facilities, orphaned during later developments of the dieselization program, were put in the hands of the development department for disposal to local industries, wherever this was practical.

• *The Engineering Department*—"We have had invaluable help from them. They perform most of the final engineering planning for our industrial sites. Many times they have laid aside their normal work to give priority to one of our site surveys."

• *The Safety Department*—"In addition to routine matters such as clearances within the plant, this department undertakes the training of affected personnel in the proper handling of dangerous materials, etc., which an industry may produce."

• *The Public Relations Department*—"We make extensive use of their photographic staff and facilities and we depend on them for help in publishing our many publications."

The Development Department staff has grown considerably since 1947 and its working methods are quite different. There are presently, in addition to the head of the department, an industrial staff consisting of two directors of development, a general industrial agent, two industrial agents, an assistant industrial agent, a research statistician and two engineers. The agricultural staff includes a general agricultural agent (who, like all members of the industrial staff, has headquarters at St. Louis), and agricultural agents at Springfield, Mo., Springdale, Ark., Atmore, Okla., and Cuba, Mo. The clerical staff includes a secretary, a chief clerk and a file clerk—a total staff of 18.

While the agricultural staff is less directly concerned, the department tends to handle industrial matters on a teamwork basis rather than each man working alone on certain projects. Thus each member of the department is familiar enough with the work of the others to substitute quite freely for one another if conditions warrant.

One means by which they keep in touch with each others' work is by a daily reading file. This is simply a collection of extra carbon copies of letters and memos dictated on the day previous. It is bound between heavy kraft paper covers and circulated for all to study. Later, it is filed in date order where it has proved to be a handy cross-reference. Frequent group conferences are also held so that the thinking, as well as the day-to-day work of each member is common knowledge throughout the department.

Water—Top Consideration

To overcome the severe initial handicap of insufficient industrial sites, the department has had to take first things first and treat the overall job as a long range project. The availability of water is the prime consideration of almost any industry. For this reason it was made the basic criterion for locating new sites.

The first task was to prepare a system water site map on which was marked every location where a 20 million gallon known minimum daily flow of water was available in a river. Next the area surrounding these locations was scoured—by means of topographical maps—for a minimum of 50 acres of reasonably level land. All such locations were then checked for the availability of other utilities. Finally, the engineering department pitched in to consider such details of the individual sites as subsoil and drainage, and out of the total study individual brochures have been prepared setting forth details of 18 potential sites in Arkansas, Missouri, Oklahoma and Alabama. None is close to a major metropolitan area and most are adjacent to towns of 10,000 population or less.

As they were completed, the brochures were sent to some 300 engineering firms which specialize in industrial site development and to chemical companies (with which water is generally a paramount factor in plant location). Where personal contacts existed with these firms, the booklets were sent with a personal covering letter. Where no contacts had been established, the brochures were instead sent to the local traffic representative who

A NEW MAN; A NEW IDEA

H. A. Baker, assistant to the president, has taken over leadership of the Development Department since Mr. Gilliland's recent promotion. Mr. Baker, who believes that an industrial development man must also be a bit of a psychologist, has brought with him at least one idea that combines a touch of psychology with some practical advantages—the use of stereo ("3-D") color photography as an aid to industrial land sales.

Although the department has always utilized photography (both still and motion pictures), Mr. Baker feels that stereo is an even more effective way of showing a prospect the exact appearance of the land he is considering. Mr. Baker points out that:

(1) The cost is not high.

(2) No special photographic experience is needed.

(3) Presentations can be quickly and easily tailored for every prospect.

(4) Neither the camera, the slides nor the viewer are at all cumbersome to carry.

He plans to extend the use of stereo pictures throughout the department.

Looking ahead, Mr. Baker plans to continue emphasizing development of industrial districts rather than the location of individual plants on individual plots. The industrial district is a cost-saver both to the shipper and the railroad, he says, because its facilities and requirements are centralized and can be more effectively served. He believes that "industrial development is the very life blood of the railroad industry, for it is the only way by which we can actually create *new* traffic."

delivered them in person and thereby established the contacts.

After the water studies are completed, the department will undertake similar studies on coal, electric power and, finally, the location of chemical industry components (which, often as not, are their own best customers). Ultimately, the department hopes to have these works incorporated in a single volume which can be up-dated, as necessary, by supplements. Since more than 100 suitable water flow sites have been located, however, much of this undertaking remains ahead.

What About Agriculture?

Today's farmer is getting more outside guidance and assistance than almost any other American entrepreneur, Frisco people believe. He may obtain help through the county agent, the U. S. Department of Agriculture, nearby agricultural schools and colleges, often from the chemical industry, and from various farm organizations. The same thing is true in the forestry field. "We know," Mr. Gilliland says, "that there are at least 5,000 experts from paper mills and the lumbering industry doing forestry development work today. At best, the Frisco could only add five to their number. When the West was new, the railroads pioneered in assisting the farmer to develop 'know-how.' But the need for us to continue this work has very much declined. For that reason our big interest today lies in the field of chemurgy and the utility of waste farm products—fields where our staff can do greater good." As examples, he cites:

- Chicken feathers, formerly a waste product of commercial chicken farms catering to the frozen foods industry, now being utilized in pillow manufacturing, as lining in heavy arctic clothing, and as an ingredient in high-nitrogen fertilizer.

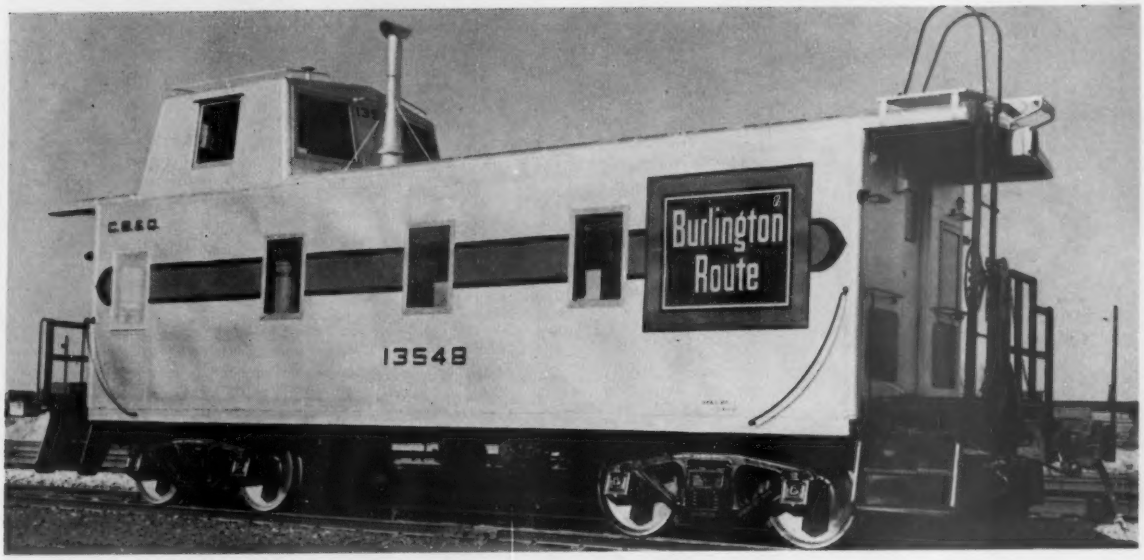
- Slabwood, which is now largely a waste product of sawmills. The Frisco is seeking an economical means of debarking and chipping it for shipment and sale to paper mills. Current thinking is toward some sort of rail-borne "thrashing machine" which might work from town to town on a mass-production basis. This would not only utilize the now wasted material, but would provide the Frisco with traffic of an attractive operating pattern with quick and centralized utility of freight cars. Sawdust and wheat straw are also being studied in this light.

- Lumber loading in gondolas and flat cars. With the discontinuance of steam motive power, there is less objection to open top loading. This would pave the way for the use of bulk handling equipment, thus cutting down siding time of rolling stock. (Some Frisco shippers are currently loading kraft paper rolls in open top equipment without covering. The thought is that the few turns of paper that might be soaked or damaged cost less than the protective covering and the extra handling it entails).

Financial Guidance

Where it is necessary, the Frisco will help an industrial concern with financing its new plant by introducing a suitable investment house or possibly by arranging for a "neutral" buyer to purchase the land where speculators might otherwise intervene. The department makes it a point to screen the various industries considering a site to make certain that their finances are sound and that they have a good credit rating.

"We want badly, in any small town, any good industry, even if it is not a direct rail shipper," Mr. Gilliland stated. "A new industry adds fresh blood and both the community and the Frisco will ultimately benefit from it."



NEW WAY CARS on the Burlington have aluminum paint and a 12-in. stripe of red Scotchlite the full length of each side. This is one way . . .

Cabooses Glamorize Freights

Thirty-five new cabooses, painted bright aluminum with a broad stripe of Scotchlite along each side, are being placed in service on the Burlington. These way cars will perform a novel public relations function by removing traditional drabness from the tail end of freight trains. With Burlington diesel units painted a light aluminum gray, the new cabooses will, as one officer remarked, "put a gleaming period at the end of the valuable cargo train."

The new all-steel cars, while in most respects of standard design, provide additional riding comfort by the use of Waugh cushion underframes. Overall length, over corner posts, is slightly in excess of 30 ft, and the light weight is 48,800 lb. One unusual feature is a window, 21¾-in. by 31-in. in each end of the cars, providing an observation spot. Adlake breather-type sash is used in these windows as well as in the cupola windows to prevent frosting. The cars are equipped with electric lights and Motorola VHF two-way radio, powered with Leece-Neville alternators. The cars are insulated with 3-in. Fiberglas in the roof, walls and floor. The 35 way cars were built in Burlington shops at Havelock, Neb.

The exterior of each car has the bright red Scotchlite stripe along the sides, edged in black. The Burlington Route emblem, 4-ft high by 5-ft wide, also uses Scotchlite. Additional use of the reflective material is made on each end of the cars where there are 28-in. by 20-in. red "patches" on either side of the door. A Mars oscillating red light is mounted at the roof line at each end of the car as an added safety feature. The light flashes on automatically when the train line air pressure is reduced to 20 lb or less. If operation of the light is desired with more than 20 lb brake pipe pressure, it may be started manually.

END VIEW of the new cabooses shows the "roadmasters' window" (right). Maximum height of the new cars is 15 ft, 7⅞ in. (over stack) and maximum width, over steps, 9 ft, 3¼ in.

THAW SHEDS for heating frozen coal cars prior to dumping in boats adjoin Pier 18 in Jersey City. Car dumpers are visible in background.

AT COAL-CAR DUMPERS...

New Heaters in Thaw Sheds...

- **Cut operating costs 50 per cent**
- **Speed up handling of cars**
- **Reduce maintenance expense**

Large operating and maintenance economies, in addition to expedited handling of coal cars, are being realized on the Central of New Jersey as a result of the installation of new direct-fired air heating systems in existing sheds for thawing out frozen coal cars preparatory to dumping them into boats. This installation has been made at the New Jersey Central's coal-handling and dumping facilities at Pier 18 in Jersey City, N. J., on New York harbor.

The new heating plant replaces a system of steam coil heaters which were supplied from a power plant some distance away. Heat loss along supply lines, as well as low heat transfer from the coils, contributed to high operating costs and an efficiency of only 40 per cent. Furthermore, under the old system steam had to be supplied to the heating coils 24 hr a day during the winter in order to keep the sheds warm and prevent freezing of the steam lines.

New York's Largest Coal Handler

About 40 per cent of all coal delivered in New York harbor is handled by the Jersey Central. Four railroads have facilities for handling coal at that harbor, but the Jersey Central is the largest handler. Its facilities consist of two complete dumpers, operating independently of each other, with supporting yards capable of accommodating 1,200 cars at one time.

Each dumper is served by a car-thawing shed having three single-track compartments, each with a capacity of eight cars, which can be operated independently of each other. The reinforced concrete sheds have compartmented hollow walls and ceilings to act as hot-air ducts and cold-air return ducts. The track openings at the ends of the compartments are fitted with hinged metal-covered wood doors which are manually operated.

The new heating plants consist of three Todd Thermo Air Heaters installed in a room over each car-thawing shed, one unit for heating each of the three track compartments. Each heater unit is comprised of an oil-fired burner, a small furnace and a combustion-air (primary air) blower. By means of Sturtevant blowers utilized from the old system the hot products of combustion, mixed with air, are forced through the ductwork in the walls (see drawing) and thence through "mushroom" outlets between the rails of each track. Cold-air return inlets are situated in the ceilings. The system maintains thermostatic control over the temperature at each outlet in a range of between 150 deg and 175 deg. This tem-

"MUSHROOM" outlets along the center of each track direct hot air on the bottoms of cars.

perature is reportedly within safe limits for the protection of car journals and airbrake equipment.

The heating plants are interlocked electrically with the compartment doors so that when the doors are closed at each end of a compartment the heater serving it comes on automatically, unless turned off by a push-button control. When the doors are opened the unit shuts off.

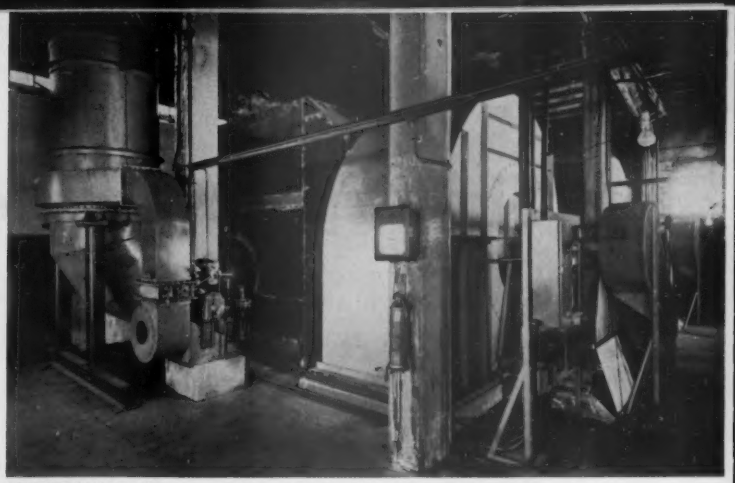
Installation of the Thermo Air Heaters has speeded up thawing operations to the point where approximately half the time formerly required for thawing is now necessary. This expedited handling has been accomplished by more rapid heating of the compartments to the desired temperature and by a more even distribution of heat throughout the compartment area. Cars can now be dumped cleaner because of the more uniform thawing of loads.

In addition to savings effected in operating costs, the new heating plants have reduced maintenance expense considerably since steam supply lines, heating coils, and traps are eliminated.

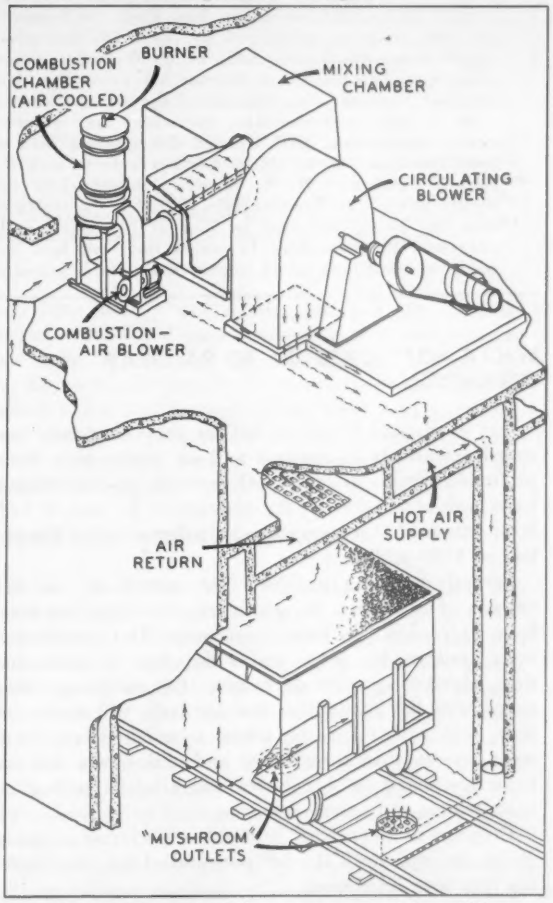
The new heater installation was designed by Byrne Associates, Inc., New York, and the equipment was furnished by the Combustion Equipment Division of Todd Shipyards Corporation, Elmhurst, N. Y.

COMPARISON OF OLD VS. NEW CAR-THAWING SYSTEMS

	(Old) *Steam System*	(New) *Thermo Air Heaters*
Cost of operation (average)	$712/day	$250/day
Operation of plant	Continuous during winter season	Only as needed
Control	Semi-automatic	Automatic
Effectiveness of heat distribution throughout compartment area	50%	90%
Time to produce required temperature in sheds (average)	2 hr — cold 1 hr — warm	1 hr — cold 25 min. — warm
Time to thaw cars (average)	2½ hr	1¼ hr



INDIVIDUAL heating plants for each compartment are located in a room over compartments at about center of each shed. At left is burner and combustion-air blower; mixing chamber is in center; while circulating blower and its drive and control panel are at right.



HEATER UNIT consists of a pressure-atomizing oil burner and a refractory-lined combustion chamber. The chamber has a steel jacket providing an air space through which the combustion air is introduced by the combustion-air blower, thus cooling the chamber walls and, at the same time, providing preheated air to the burner. Complete combustion takes place in this chamber. Because of space conditions the heater is mounted vertically and a refractory-lined elbow and duct extend into the mixing chamber. The duct is slotted at the top so that flue gas is blown vertically, while the return air from the shed is carried horizontally across the stream, insuring even mixing at the inlet of the circulating blower. The hot products of combustion mixed with air are forced through hollow-wall ducts by the circulating blower to "mushroom" outlets along the center of each track. The air recirculates through cold-air return inlets and hollow-wall ducts in the compartment ceiling.

Six Aspects of the Hot-Box Problem

- How hot boxes handicap operation
- Proposed new designs of journal-box details
- Getting the oil to the journal
- Why better oils?
- Continuous education a factor
- A commercial laboratory at work

The united front with which the railroads, under the leadership of the AAR, are attacking the problem of reducing hot boxes on freight cars by improving the performance of solid bearings was highlighted on the program of the New York Railroad Club meeting held at the Hotel Commodore, New York, on January 20. The program, sponsored by the AAR, was presented under the chairmanship of W. M. Keller, executive vice-chairman and director of research, Mechanical Division, who introduced the six speakers.

R. G. May, vice-president, operations and maintenance department, AAR, opened the program with a brief statement of the things hot boxes do to orderly railway operation. H. W. Wood, assistant chief of motive power, car, Pennsylvania, described the changes that are being proposed in journal box parts and suggested the procedure by which they can best be made to contribute to an improved standard journal-box assembly. C. S. Patton, Jr., assistant superintendent of motive power, car, Norfolk & Western, told of the tests of that road of waste packing substitutes and stated his views as to the requisites for a satisfactory means of feeding oil to the bearing. M. S. Clark, of the research and technical department of the Texas Company, told of a cooperative program conducted on the N&W to determine whether oils other than that specified by the AAR would reduce hot boxes. R. W. Seniff, manager of research, Baltimore & Ohio, told of the effect of an educational program for the training of employees who service journal boxes in improving journal-box performance. Rosser L. Wilson, vice-president, American Brake Shoe Company, described the Mahwah journal-bearing laboratory* of that company with slides and showed some of the bearing types which have been under study at that point. One of these is illustrated.

WHAT HOT BOXES DO TO RAILWAY OPERATION

The AAR, said Mr. May, has for some time been engaged extensively in research and the results have been profitable. From 55 of the 90 research projects which have been undertaken by the association, he said, it had been estimated that the railroads had profited to the extent of $100 million a year.

Several operating problems are created by the occurence of a hot box, he said. First, the dispatcher may have to realign his train movements. The yardmaster must readjust his plans and suffer loss of yard-crew time. Road-crew overtime results; the out-going crew, called with the expectation that the train will arrive on time, will collect for the initial terminal delay. Even more serious than these losses and annoyances are the hazards created by hot boxes which occur in fog or snow storms and escape detection.

Progress in improving journal-box performance must go on, he said, until the full potential of the solid bearing has been developed.

GETTING OIL TO THE JOURNAL

The first cost of waste is lower than any present substitute, said Mr. Patton; it can be reclaimed and reused indefinitely; it requires no highly skilled labor to install and maintain it; given adequate attention, its performance is good. But maintenance costs are high and are accompanied by train delays at each terminal for inspection, setting up the packing and additional lubrication. Waste tends to creep under the bearing.

A satisfactory substitute, said Mr. Patton, must provide adequate lubrication under adverse conditions. Its overall cost must come within the range of the waste-packed box; it should eliminate waste grabs and lint accumulations; it should work in the present box with minimum modifications; it should not need skilled mechanics for servicing; and it should not be subject to sudden failure.

Mr. Patton told of the five types of lubricators which the N&W now has under limited test. All exhibit improvements over waste packs in reducing lint and avoiding waste grabs, he said, and all require reasonable oil consumption. First cost is higher than waste but only several years' records will determine the overall cost. They run at least twice the present repack period before requiring removal, he said. Most of them do a little better lubricating job than waste and he thinks that bearing life may be extended. Operating temperatures are definitely better than with waste.

"It is very doubtful," said Mr. Pattton, "whether any railroad can afford to continue spending the money necessary for maintaining waste-packed journal boxes well enough to meet today's demands of long trains operated at high speeds and with short terminal time.

TIME FOR BETTER OIL?

For about 20 years from 1929, Mr. Clark said, no great changes were made in the quality of car oils. This was because of the fairly rigid AAR specifications covering straight mineral oils, to meet which it was not necessary to provide highly refined or additive type oils. The low revenue derived from these low-cost oils did not encourage much research on the part of the suppliers. For some time the need has been felt for higher quality oils to care for heavier loads, higher

* For a description of the Mahwah laboratory see *Railway Age*, May 3, 1954, page 40.

speeds, longer sustained runs at high speed, and higher rates of acceleration in starting.

In 1948, said Mr. Clark, the N&W initiated a co-operative program to find out if other types of oils could improve the hot-box situation. Several blends were field tested in comparison with other oils. Viscosity ranged from 200 to 650 sec at 100 deg F. Some were straight mineral oils and some had additives. The tests were run on several fully loaded 70-ton cars operating in a special train.

Conclusions were that: (1) Under normal conditions lower viscosity oils resulted in lower temperatures; (2) higher viscosity oils gave better performance on rough journals; (3) boxes can operate on a minimum of five pints of oil; (4) seating or breaking in of bearings does not cause hot boxes; (5) premium oil with additives gave better performance than straight mineral oils, especially when cars were going slowly around curves. Temperatures with straight mineral oils increased rapidly, while additive oil kept temperature down.

The oil which showed up best, an additive type, meets all the physical tests of the present AAR Specification EM 906-50. It is being used by 14 railroads with improvements in hot-box records ranging from 45 to 95 per cent in miles per hot box set out.

The Texas Company's conclusions are that no journal-box oil will be a panacea for all hot-box troubles—a good oil is only one of the factors involved; oil quality in the long run will pay for itself.

PROPOSED JOURNAL-BOX CHANGES

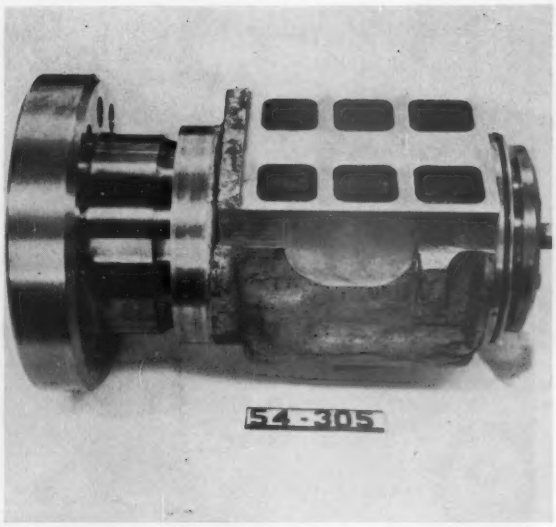
Equipment for use in the journal-box assembly, said Mr. Wood, must have longer life and be trouble free for longer periods, permitting repack periods of at least 36 months, to coincide with the period for air-brake attention. Minimizing the need for journal-box servicing is necessary to reduce opportunities for man failure and to effect economies.

Three approaches to more trouble-free application of lubrication to the journal and bearing are the waste retainer, the lubricating pad and the journal lubricator. Waste retainers have produced favorable results, but too much trouble has been experienced with the wire spring type being broken or out of place and some require removal between repack periods to set up the packing. For ultimate success, he said, these objections must be overcome. Lubricating pads are in the process of improvement. Some journal lubricators have required modifications to withstand the service shocks.

The ductile iron bearing, the flat-back bearing, the counterbored bearing, the ventilated bearing, and the full-sleeve type bearing have been offered to the railroads and tested. Mr. Wood suggests that effort be made to perfect and test a consolidation of the bearing and the wedge.

In Pennsylvania tests, Mr. Wood said, AAR ventilated bearings ran from 10 to 20 deg cooler in hot weather. Lubricating pads produced lower temperatures than waste packing, but have had to be changed to overcome weaknesses. Thread risers in waste-packed boxes are still a problem and retainers reduce this condition.

Fitted journal bearings, Mr. Wood said, show definitely improved bearing performance and decreased overheatings. This requires step size journals. The journal sleeve design will require but one size of fitted bearing. Mr. Wood recommends the elimination of the axle collar, application of a sleeve and one size of bearing for each axle size. He considers that much is to be gained if the best features of the fitted bearing of flat-back design, the journal sleeve and the collarless journal are combined and a new design of journal-box assembly developed.



A CARTRIDGE BEARING UNIT designed on the solid bearing principle to fit into a standard journal box. The bearing, developed at the Mahwah laboratory of the American Brake Shoe Company, goes around the axle; the one-piece babbitt-lined bronze casting is cored to provide an oil reservoir with simple pad lubricator.

EDUCATION FOR TEAMWORK

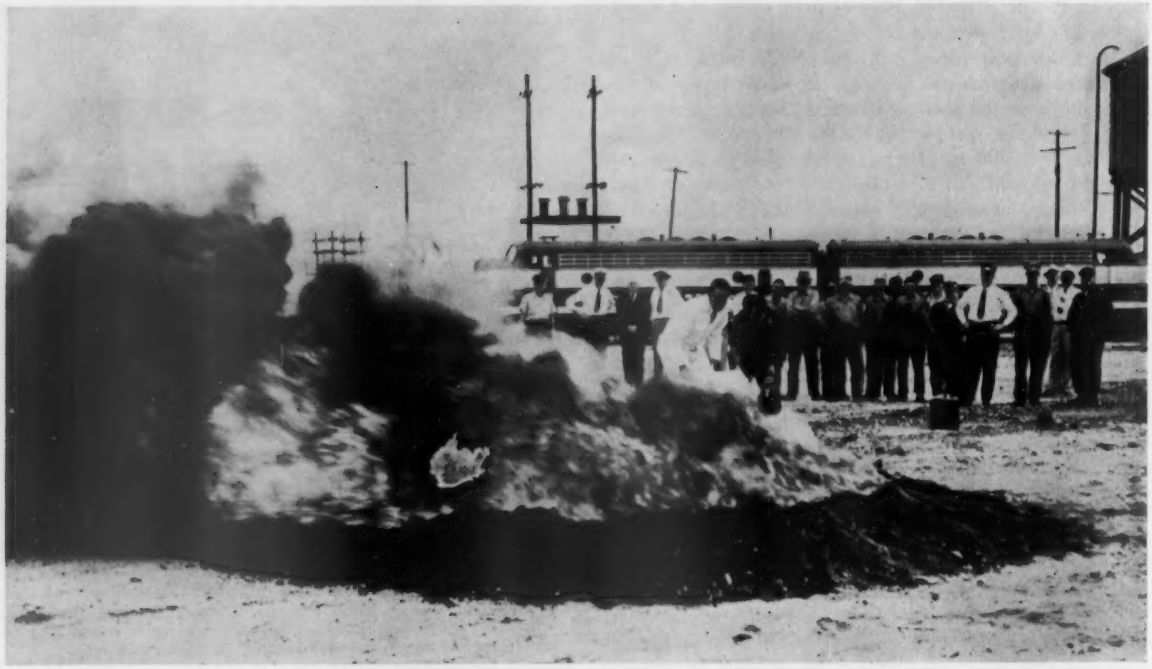
What caused the B&O freight-car journal-box performance to be three times as good in 1954 as in 1942?

Searching for the answer, Mr. Seniff concluded that improvements in materials did not provide the answer in the face of a steady rate of dieselization. The answer, he believes, is education—its essence is in the realm of human relationships and psychology. It starts at the top and works down; it also maintains free channels for the flow of information from the bottom to the top. The supervisor of lubrication keeps these two-way channels open.

Everyone must accept the fact that the solid-bearing will run without overheating (most of them do) if conditions are right, he said. The men and supervisors must know the "why" as well as the "how" of instructions. Education involves learning what is a well-balanced force and how much time the job requires. Everyone must know that the best materials are being furnished, that no source of information has been left unexplored.

Hot boxes on the morning report must receive immediate and uniform action. Servicing points with poor records must be helped to improve. Pride of accomplishment must be fostered at all levels. There is no substitute for good morale and teamwork.

Mr. Seniff expects the improvements to continue.



DEMONSTRATING use of fire equipment, Chief Kooser shows ACL employees at the Florence, S. C., shops the proper technique. By spraying the dry chemical into the air, it is possible to create a heat-absorbent shield.

What ACL Does About Diesel Fires

Five years ago, the Atlantic Coast Line took a bold step in its fire protection when it decided to standardize on the use of dry chemical fire equipment aboard all its diesel locomotives.

At that time dry chemical—which is actually specially treated baking soda—was comparatively untested as the first line of fire defense in the railroad industry, although it had been accepted in petroleum, steel and other industries.

How has the experiment worked out for the Atlantic Coast Line?

According to Chief Fire Prevention Engineer Robert G. Kooser, these are the facts:

- The Coast Line has not had an insurance claim for fire damage to a diesel locomotive in three years, not counting fires resulting from wreck. In the five years since Ansul dry chemical was installed, claims have amounted to less than $500. In the five years preceding, fire loss claims amounted to thousands of dollars.
- Although diesel locomotive fires continue to break out from time to time, the dry chemical "knocks them out" so quickly that invariably there is no damage and the locomotives are able to operate back to the shops.
- Dry chemical fire protection has been extended to other company properties throughout the system until today approximately 60 per cent of the Coast Line's 3,600 extinguishers are of the Ansul dry chemical type. This compares with zero five years ago.
- The Coast Line's fire insurance rate is now "the most favorable" in its history. Ten years ago the road paid much higher rates.

The Coast Line is one of the few roads that uses dry chemical as a first line of defense, backing it up with a 77-gallon pre-mixed foam tank.

Each ACL diesel A unit carries three 30-pound Ansul dry chemical extinguishers—one mounted in the cab near the fireman, another in the passageway near the front end, and a third in the opposite passageway near the rear end. The foam tank is also mounted at the rear.

Diesel B units carry two 30-pound chemical extinguishers, one in each passageway. They also carry foam. Road switchers are protected by three dry chemical units and foam, while switch engines carry two 30-pounders, plus foam.

Dining Car Equipment

In addition to the diesels, each of ACL's more than 60 dining cars carries a four-pound extinguisher as protection in case of grease or electrical equipment fires in the kitchen.

A large amount of dry chemical has been used in extinguishing hot box fires. Although dry chemical originally was not intended for such use, train crews have developed their own techniques for controlling the hot box fires. This consists of knocking down the flames with dry chemical, after which the waste packing is removed quickly by means of a packing hook.

The Coast Line's dieselization program began in 1939, and complete dieselization was achieved last year. Today the road has 564 units. Although it had just over 200 units back in 1949, this constituted a sizeable investment, and that year a special committee was appointed to study the entire problem of protecting this investment from loss by fire.

Previously, special washing machines had been installed at diesel maintenance points and a strict cleaning program was adopted in an effort to remove oil and rubbish of all kinds before each unit took to the road; nevertheless oily conditions continued to develop due to gasket or other failures on the road.

Fire protection consisted at that time of a one-quart carbon tetrachloride (CTC) extinguisher in the control cab, and two one gallon CTC units plus a two and a half gallon foam extinguisher in the engine room. This protection was regarded by the committee as inadequate, but the extent of its inadequacy was driven home in full force between November 1943 and May 1945, when the ACL suffered three serious diesel fire losses, none the result of a wreck. These three incidents caused a fire loss of approximately $92,000.

First Recommendations

The fire committee, after its study, recommended the installation of 77-gallon stationary mechanical foam tanks on all passenger A and B units. Four years later, the committee sought to determine whether more modern methods of controlling diesel locomotive fires had been developed.

After extensive tests with carbon dioxide and dry chemical extinguishers, the committee decided to change to Ansul dry chemical, citing these reasons in its report:

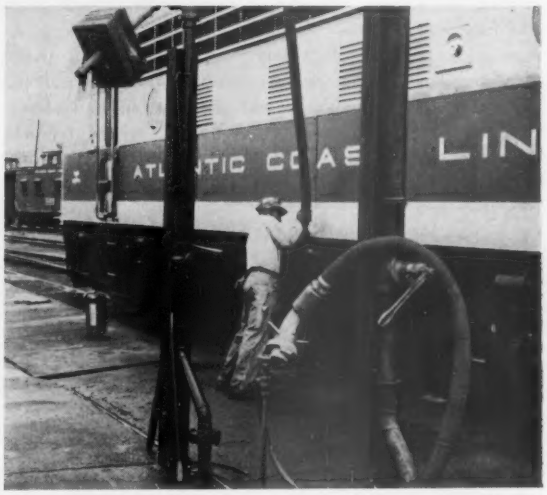
- Carbon tetrachloride is expensive to maintain. In 1948, Coast Line paid out approximately $7,000 for replacements and repairs, plus $20,000 in time costs for inspections and tests.
- Dry chemical eliminates costly maintenance. Since there are no moving parts, it requires only a periodic visual inspection and an annual check which can be performed in two or three minutes. This can be done by an assigned locomotive inspector in passing.
- Dry chemical also is most effective against electrical and oil fires, and has complete underwriters approval.

"Therefore," the report concluded, "because of the heavy investment in our diesel units and the absolute necessity of keeping them performing efficiently and with a minimum of lost time, plus the desirability of keeping our insurance rate at the lowest possible level, we recommend the use of dry chemical on all diesel locomotives."

Before adopting the new units, ACL's Insurance Department made additional tests to check the effectiveness of dry chemical on actual burning electrical equipment and on diesel locomotives operating in high-speed service.

To determine whether the dry chemical was abrasive when used on electrical equipment, the engineering department conducted tests which consisted of saturating a 10-hp a-c electric motor with gasoline and lubricating oil and igniting it. The motor was permitted to burn for a few moments while still running; then the fire was extinguished with dry chemical.

EMPLOYEES at the ACL's Florence, S. C., yards are taught the fundamentals of fire extinguishment in this fire training class.



FIRE SAFETY regulations on the Coast Line require a fire extinguisher as a standby, whenever diesels are refueled.

THE ACL's diesel A units each carry three 30-pound dry chemical fire extinguishers. One is in the cab near the fireman, a second is in the passageway just below, and a third, not shown in the picture, is in the opposite passageway in the rear. Here, Chief Fire Prevention Engineer R. G. Kooser inspects one of the units.

ON THE "Coast Line," men are more important than machines. This demonstration shows the proper way to get out of a fire trap by creating a shield against heat.

The same procedure was repeated four times. The report said, although motor was completely doused with the chemical, it continued to operate for the next 48 hours.

"When we tore the motor down and tested the parts," related Mr. Kooser, "we found that the dry chemical in the motor had acted more as a lubricant than as an abrasive." He adds that later reports of actual extinguishments while trains were in operation support the belief that dry chemical is not abrasive.

Recently, for example, three flashovers occurred in the main generator of the northbound "East Coast Champion," north of Fayetteville, N. C. Each time the fire was extinguished by dry chemical, and the train completed its run to Richmond. There was no evidence of abrasion, Mr. Kooser said.

On the Western division, a crank case explosion sprayed fire over most of the inside of the unit. Although a crew member was burned getting to an extinguisher, he managed to put out the fire, and the unit continued its run to Jacksonville.

In another case, fan belts between the cooling fans and the air compressor caught fire, spreading it into the false ceiling. After extinguishment, the unit resumed its trip to Jacksonville, again without incurring abrasive damage. Mr. Kooser reported there also have been a number of electrical control cabinet fires on diesel locomotives, and in each case the unit continued to operate without any time loss after extinguishment by dry chemical.

The 100% dieselization of the road's locomotive power has resulted in many changes in the fire protection program.

While many fires hazards have increased, others have lessened. For example, many small shops have been closed or consolidated, lessening the area to be protected.

Also, farmers in the area served by ACL have diversified their crops so that there is considerably less cotton carrying which lowers fire hazards.

Another factor is the elimination of steam locomotives, which has reduced the number of right-of-way fires started by engine sparks. But, most important, are the facts that ACL personnel is now better trained and has better equipment, and that top management is throwing its full weight behind the fire protection program.

On the debit side, many fire hazards have increased on the Coast Line. The increased industrialization of the southeastern states has required the road to handle more dangerous commodities, such as volatile plastics, chemicals and gases.

Also, diesel locomotives are far more susceptible to total destruction than were their steam predecessors.

To forestall any such calamity, Coast Line has developed an intensive program of fire education and training that embraces every employee. This program is administered by Mr. Kooser, under the overall supervision of Robert Scott, director of safety and insurance, and W. J. Mathias, superintendent of insurance. Mr. Kooser is chairman of the committee on rolling equipment-locomotives in the fire protection and insurance section of the Association of American Railroads. His job is to define and administer all problems relating to fire protection, assisted by H. G. Hubbard, chief clerk, and Jack Frost, supervisor of fire prevention.

The basis of the ACL program is maintenance of good housekeeping practices, cleanliness and neatness around all fire hazards. To drive home the importance of this point, ACL's slogan, "A Clean Place Seldom Burns," is displayed throughout the system—in repair shops, on bulletin boards and near dangerous hazards.

Second in importance is the organization and training of fire brigades in shops and repair facilities. Each shift has its brigade, so that fire protection is provided on a 24-hour basis. All hazards must be inspected weekly by brigade chiefs and their assistants.

Employee Training

Fire schools are held at least once a year to afford all new employees training in the use of all types of extinguishers. Older employees are required to attend, too, to participate in a refresher course. Fire training is, of course, an important part of the instruction provided on the company's diesel instruction car.

Educational work is accomplished by means of fire safety posters provided by the National Fire Protection

(*Continued on page 34*)

ACL FIRE PREVENTION RULES AT DIESEL SERVICE FACILITIES

1. **Inspect all electric wiring and repair where necessary. Keep switch boxes and panel boards closed at all times.**
2. **Keep shop clear of all combustible materials.**
3. **Minimize greasy conditions and permit no oily rags on premises where they might ignite spontaneously. Keep diesels clean and free of oil, dust, etc., as much as possible.**
4. **Check all fire fighting equipment, especially extinguishers and hose, to see that they are in good condition, conveniently located, and completely charged.**
5. **Enforce "No Smoking" rule strictly. "Strike Anywhere Matches" not permitted in shop.**
6. **After using torches and welding on diesel, cool surface by using a tank of water with pressure pump.**
7. **Provide self-closing containers for oily rags.**
8. **Gasoline or kerosene must not be used for cleaning. Instead, cleaning solvents are to be used.**
9. **If possible, all diesel units should be cleaned before entering shop.**
10. **Do not allow fuses or torpedoes inside shop except those stored in locomotives in the box or location provided for them.**
11. **All electrical extension cords must be explosion and vapor proof.**

NERVE CENTER of a ticket sales and reservation operation serving the whole Philadelphia area, this installation at the Pennsylvania's 30th Street Station employs facsimile reproduction and electronic devices to help public relations by . . .

Selling Pullman Space in Seconds

Employing the newest electronic facsimile reproduction equipment and other recent technological developments, the Pennsylvania has inaugurated at Philadelphia a reservation and ticket selling system which is described as affording the passenger the fastest service ever offered. The system not only speeds over-the-counter sales, but also achieves much faster handling by telephone of reservations and inquiries as to fares and other information.

The installation at 30th Street Station, Philadelphia, is a center for handling at comparable speed the reservations and ticket sales at other stations and ticket offices in the area.

The basis of the Pullman reservation and space sales operation is a preprinted coupon, similar to a theater ticket, for each unit of space, these being held in racks by train and date for several weeks ahead. When a customer at the counter asks for a ticket the appropriate coupon is removed from the rack in the space control center and placed in a high-speed Western Union Ticketfax facsimile reproduction machine. The ticket seller at the same time places in the machine a ticket form on which the coupon is reproduced in a few seconds. While this operation is going on the ticket seller inserts the proper matrix in a Ticketeer machine to produce the corresponding railroad ticket. The customer is handed the two tickets and pays for them, and the sale is completed. Ordinarily the slowest part of the transaction will be making change.

Sales at other offices in the Philadephia area are

RAILROAD TICKETS, single-trip or interline round-trip, are printed from a metal matrix by this Ticketeer.

PULLMAN TICKETS are issued by facsimile machines from coupons held in control center in background.

RESERVATIONS by phone are handled by pneumatic tube; fare and route data show on microfilm reading device.

handled in the same way, the ticket being issued by facsimile reproduction from the coupon in the 30th Street center. If offices in other cities were so equipped, tickets could be issued by facsimile reproduction in a matter of seconds at Chicago, Los Angeles, or any other point.

Availability of sleeping car space for a week ahead on 23 principal trains to 28 important destinations is shown on a large illuminated Ready-Sale Board at the 30th Street ticket office, where it can readily be scanned by the customer and the ticket seller. The board is also visible to the telephone reservation clerks, so they can immediately tell what space is available for a week ahead when a customer telephones. For trains or destinations not shown on the board, or for dates further in advance, the clerk sends an inquiry form by "Whiz Tube" to the space control center. If the desired space is available, the appropriate coupon is returned to the telephone clerk by this new type pneumatic tube, which requires no metallic carrier. When an understanding is reached with the customer on the phone as to the time and place for picking up the ticket, the facsimile device is employed to produce the ticket at that point.

The new facility also provides for direct facsimile transmission of tickets for Pullman space into offices of subscribers in the area who are steady purchasers of tickets in volume. This arrangement permits the customer to transmit an order by facsimile and to receive the ticket in his office, if the space is available, in a matter of seconds. Railroad tickets to specified points are furnished in quantity to such customers on a consignment basis.

The new ticket office and reservation center occupies 4,290 sq ft of floor space on the main concourse. The installation includes 26 facsimile machines, 20 microfilm units, and 17 Ticketeer machines. It incorporates many features of the pilot system installed in Pittsburgh in 1953 (*Railway Age*, May 18, 1953, page 144), but goes farther in the utilization of high speed facsimile reproduction techniques. It is planned to put these advances into operation at Pittsburgh, and studies are being made as to the feasibility of similar centers in other major PRR stations.

DIESEL FIRES

(Continued from page 32)

Association and the AAR. These are distributed systemwide. The Insurance Department also distributes fire bulletins from time to time, for posting on bulletin boards.

To build morale of the fire brigade members, various social events, such as barbecues, are sponsored from time to time, and these have been found to be highly popular.

An important part of the ACL fire protection program is maintenance of close relationships with the communities served by the railroad. Each year, Mr. Kooser and his assistants visit every town on the road, conferring with municipal fire chiefs and explaining the problems of railroad fire protection.

Since there are some 782 towns served by ACL, Messrs. Kooser and Frost are on the road an average of 22 days a month throughout the year. This careful attention to the municipal fire protection forces has paid off a number of times, when the local firemen have answered calls in the road's diesel shops or along the right-of-way. Municipal fire chiefs and their men also are invited to attend fire schools conducted regularly at local diesel repair shops and other installations.

This type of cooperation also works in reverse, since Coast Line fire experts are made available to speak before high schools, chambers of commerce and similar groups. Much of this activity is in connection with the observance of Fire Protection Week.

Because dry chemical fire equipment is not only used on diesels but also protects ACL fueling stations, repair shops and motorized equipment, such as tractors, lifting machines and cranes, each fire training school devotes a considerable amount of time to teaching employees how dry chemical should be handled.

"First thing we do," says Mr. Kooser, "is to eliminate some of the men's natural fear of working with chemicals. To prove that dry chemical is harmless, we publicly taste and swallow some of the dry powder. When they see that we don't keel over dead, half of our job is done."

Next, the men are taught that they are more important than machines. They are shown how they can create a shield against the heat by spraying dry chemical into the air in front of them. This absorbs most of the heat so effectively that anyone can break out of a circle of fire in case he finds himself trapped, they are told.

As for the actual technique of fighting fire with the dry chemical, the men are taught to direct the chemical streams towards the forward edge of the flames and sweep it back toward the source with a rapid side-to-side motion. This creates a blanket of dry chemical over the burning area, and the fire goes out.

After the fire is out, the firefighter must keep his eye on the extinguished area. Since fires in flammable liquids sometimes reflash, Coast Line men are taught never to turn their backs on a fire, even after it is extinguished, but to back away from it. Thus, they can handle a reflash if it occurs.

Because stumbling near a fire may prove fatal, trainees are taught to study the terrain on which they are operating. The location of extra fire extinguishers is another "must" on the list of things to know.

Equipment & Supplies

(Continued from page 15)

PASSENGER CARS

The **Burlington** has ordered 10 additional gallery-type air-conditioned coaches for commuter service between Chicago and Aurora, Ill. The cars will be built by the Budd Company, with delivery scheduled for the final quarter of this year.

The road said the purchase was based upon the "continuing growth in popularity" of its suburban service and "the effectiveness of the gallery car in handling a maximum volume of rush hour traffic." A detailed description of the cars appeared in *Railway Age*, October 21, 1950, page 20.

Traffic

Missouri to Study First Piggyback Tariff

The first intrastate piggyback tariff filed in Missouri will be studied by the state Public Service Commisson, beginning February 3.

The tariff, filed by the Wabash for service between St. Louis and Kansas City, is basically similar to those now in effect between St. Louis and Chicago, Detroit and Chicago, and Detroit and St. Louis, in which the road provides pickup and delivery service of trailer-load lots on railroad bills of lading at truck-competitive volume rates and minimum rates.

The commission has indicated that, because the proposed tariff is the first of its kind within Missouri, it must be determined whether or not such service can lawfully be performed within the state without specific authorization from the commission. The railroad reports that the commission feels some of the proposed rates, minima and rules may be unreasonable, even though, so far as the road has been able to determine, specific objections have not been raised by trucking companies.

Figures of the Week

Freight Car Loadings

Loadings of revenue freight in the week ended January 22 totaled 635,653 cars, the Association of American Railroads announced on January 27. This was a decrease of 9,287 cars, or 1.4%, compared with the previous week; an increase of 18,440 cars, or 3% compared with the corresponding week last year; and a decrease of 61,862 cars, or 8.9%, compared with the equivalent 1953 week.

Loadings of revenue freight for the week ended January 15 totaled 644,940 cars; the summary, compiled by the Car Service Division, AAR, follows:

REVENUE FREIGHT CAR LOADINGS
For the week ended Saturday, January 15

District	1955	1954	1953
Eastern	110,768	109,106	124,779
Allegheny	117,933	116,042	143,937
Pocahontas	51,104	45,218	51,792
Southern	121,872	117,091	129,893
Northwestern ..	76,241	70,129	77,918
Central Western	113,169	106,952	115,697
Southwestern ..	53,853	55,333	61,001
Total Western Districts	243,263	232,414	254,616
Total All Roads	644,940	619,871	705,017
Commodities:			
Grain and grain products	50,986	45,611	46,086
Livestock	10,091	9,220	9,163
Coal	126,170	121,336	134,919
Coke	10,162	10,190	15,030
Forest products ..	42,299	38,893	45,581
Ore	15,530	15,577	19,544
Merchandise l.c.l.	58,506	58,446	65,857
Miscellaneous .	331,196	320,598	368,837
January 15	644,940	619,871	705,017
January 8	602,203	624,229	688,110
Cumulative total, 2 weeks	1,247,143	1,244,100	1,393,127

In Canada.—Carloadings for the seven-day period ended January 7 totaled 58,759 cars, according to the Dominion Bureau of Statistics.

	Revenue Cars Loaded	Total Cars Rec'd from Connections
Totals for Canada:		
January 7, 1955	58,759	26,088
January 7, 1954	51,081	21,762

Securities

Alleghany Corporation. — *Would Increase Stock.* — This firm's stockholders, at a special meeting February 8 in Baltimore, will be asked to approve proposals to create a new class of preferred stock consisting of 1,367,440 $10-par 6% convertible preferred shares, and to increase the authorized number of common shares from 12,350,000 to 22,000,000, to provide sufficient shares for conversions of the new preferred stock.

If the proposals are approved, 10 shares of the new preferred stock would be offered in exchange for one series A share. To the extent that series A shares are exchanged, stockholders have been informed, dividend arrearages will be reduced. If all series A shares are surrendered, dividend arrearages, which "constitute a legal barrier to dividends on the common stock," will be completely removed.

Dividends Declared

ATLANTIC COAST LINE.—new common, initial, 50¢, payable March 14 to holders of record February 11.

CHICAGO, BURLINGTON & QUINCY.—$1.50, payable March 30 to holders of record March 14.

CHICAGO & EASTERN ILLINOIS.—common, 25¢, payable February 15 to holders of record February 1; 52 Class A, $1, payable May 2 to holders of record April 18, and $1, payable November 1 to holders of record October 18.

LOUISVILLE & NASHVILLE.—increased quarterly, $1.25, payable March 14 to holders of record February 1.

PEORIA & BUREAU VALLEY.—$2.12½, semi-annual, payable February 10 to holders of record January 31.

UNITED NEW JERSEY RR & CANAL.—$2.50, quarterly, payable April 10 to holders of record March 21.

Security Price Averages

	Jan. 25	Prev. Week	Last Year
Average price of 20 representative railway stocks	83.70	82.45	61.52
Average price of 20 representative railway bonds	98.79	97.86	93.26

Railway Officers

CENTRAL OF GEORGIA.— J. Bryan McKerley, division engineer at Columbus, Ga., has been promoted to assistant chief engineer at Savannah,

J. Bryan McKerley

Ga., succeeding the late **George A. Belden. Ferrell Dodgen,** track supervisor at Leeds Ala., succeeds Mr. McKerley as division engineer at Columbus.

CHESAPEAKE & OHIO.—R. N. Begien, Jr., has been appointed staff assistant to vice-president—operations at Richmond, Va., and his former position—assistant general manager—has been abolished.

W. N. Hartman, superintendent telegraph and signals, has been named general superintendent — signals and communications, remaining at Richmond, with general supervision over all signal and communication matters for the entire system. **M. F. Anderson,** engineer communications and signals at Detroit, has been appointed assistant general superintendent—signals and communications there, with responsibility over the entire system. **T. L. Carlson,** assistant superintendent of signals at Richmond, has been named superintendent of signals there, with system-wide jurisdiction. **P. A. Flanagan,** assistant superintendent of

communications at Richmond, has been promoted to superintendent of communications there, with responsibility over the entire system. The former positions of Messrs. Anderson, Carlson and Flanagan have been abolished.

Jurisdiction of **R. K. Johnson,** superintendent work equipment and reclamation of the Southern region, has been extended to a system-wide basis, with headquarters as before at Barboursville, W.Va. **H. E. Kirby,** cost engineer, has been named cost engineer — system, with headquarters remaining at Richmond and responsibility for maintenance of way cost engineering matters over the entire road.

Thomas J. Hayes, assistant coal traffic agent at Milwaukee, has been transferred to Beckley, W.Va. **Arthur G. Daughtrey** has been appointed general agent at Charlotte, N.C.

Fred B. Roberts, training officer in the personnel department at Cleveland, has been appointed assistant to general manager at Detroit.

DETROIT, TOLEDO & IRONTON.—Bert C. Smart, roadmaster at Dearborn, Mich., has been appointed assistant chief engineer there. **Howard W. Seeley** has been named engineer, maintenance of way.

ELGIN, JOLIET & EASTERN.—Robert J. Schiek has been appointed acting editor of the J—Milepost Magazine. **W. E. Deaton,** assistant to president, will continue to supervise the publication.

ERIE.—Thomas P. Scott, freight claim agent at Cleveland, retires January 31 after more than 46 years of service.

GULF, MOBILE & OHIO.—Glenn Keen, division freight traffic manager at Montgomery, Ala., has been transferred to Birmingham, succeeding **C. S. Gregory, Jr.,** who has been named assistant general freight agent at New Orleans. **B. D. Casey,** general agent at Laurel, Miss., has retired after more than 46 years of continuous service with this road and its predecessors.

LOUISVILLE & NASHVILLE.—J. T. Metcalf, general attorney at Louisville, has been named general solicitor there, succeeding **J. H. McChord,** retired.

E. J. Block, assistant auditor freight accounts, has been appointed auditor freight accounts, at Louisville, succeeding **Fred W. Stoll,** who retired January 1 after 47 years of service. **Arch B. Terrell, Jr.,** special traveling auditor, replaces Mr. Block. **Carl F. Bratton,** general accountant, has been appointed to the newly created position of assistant to comptroller at Louisville.

MAINE CENTRAL.—Sumner S. Clark, general attorney, has been appointed assistant to president, with headquarters as before at Portland, Me., effective February 1.

Eric P. Smith, statistician, has been appointed chief statistician, and also will handle work previously covered by **H. M. Harris,** chief examiner, who retires February 1, after 47 years of service.

Sumner S. Clark

MISSOURI PACIFIC. — M. M. Knight has been named assistant signal engineer at Houston, Tex., succeeding the late **P. H. Peters.**

A. R. Copeland has been appointed general agent at Buffalo, N.Y., succeeding **E. S. Dougall,** who has retired after more than 42 years of service.

MONON. — William K. Holton has been named office assistant to president.

NEW YORK CENTRAL.—Douglas Bogart has been appointed director of service, reporting to the vice-president—staff.

ROCK ISLAND.—T. J. Zirbes, Jr., public relations representative, has been appointed special representative, public relations department, at Chicago, succeeding **A. B. Gregory,** who has resigned.

An electronic data research committee has been formed within the accounting department to work out flow charts and instruction programs necessary for use of an IBM Type 650 calculating machine. The company plans to develop procedures for handling payrolls, materials issues, purchases, interline abstracts, accounting distributions, statistics, etc. **E. W. Weir,** auditor machine accounting at Hamilton Park (Chicago), has been named auditor electronic procedures and will serve as chairman of the committee on a full-time basis. **L. J. Zenke,** assistant to general auditor, will be a full-time assistant to Mr. Weir. The remainder of the committee will be composed of representatives of various departments.

SEABOARD AIR LINE. — John P. Derham, Jr., assistant vice-president, freight traffic solicitation and service, has been elected vice-president in charge of freight traffic, to succeed **George B. Rice,** who retired on January 31. Mr. Derham, a native of Green Sea, S.C., and a graduate of Clemson College, became associated with the Seaboard in 1920 at Jacksonville, Fla., as development agent in the agricultural department. Two years later he transferred to the traffic department; in 1936 was promoted to assistant freight traffic manager at Jacksonville, and in 1940 was transferred to Norfolk with the same title but with jurisdiction over the entire system. He was appointed freight traffic manager in 1947 and assistant vice-president in 1951.

John P. Derham, Jr.

NORTHERN PACIFIC.—Stephen H. Barlow, assistant engineer of track, who has been appointed system engineer of track at St. Paul (*Railway Age*, January 17, page 29).

OBITUARY

Walter H. Browne, foreign freight traffic manager of the **Lackawanna** at New York, died January 23, after a long illness.

Arthur N. Gustafson, 65, general agent of the **Northern Pacific** at Pittsburgh, died January 16 at Mt. Lebanon, Pa.

FOR SALE
RAILWAY EQUIPMENT
Used—As Is—Reconditioned

RAILWAY CARS
All Types

"Service-Tested"
FREIGHT CAR REPAIR PARTS
For All Types of Cars

LOCOMOTIVES
Diesel, Steam, Gasoline, Diesel-Electric

RAILWAY TANK CARS and STORAGE TANKS
6,000 - 8,000 and 10,000-gallon Cleaned and Tested

CRANES
Overhead and Locomotive

RAILS
New or Relaying

IRON & STEEL PRODUCTS, INC.
"ANYTHING containing IRON or STEEL"

General Office
13456 So. Brainard Ave.
Chicago 33, Illinois
Phone: Mitchell 6-1212

New York Office
50-c Church Street
New York 7, New York
Phone: BEekman 3-8230

RAILROAD TRACKWORK EQUIPMENT
FOR SALE, FOR RENT, RENTAL PURCHASE

Item	No.	DESCRIPTION	UNIT PRICE
1	2	Track wrenches, Nordberg, factory rebuilt	$ 700.00
2	1	Track wrench, Raco	700.00
3	1	Impact Air wrench, Chicago Pneumatic	300.00
4	8	Electric Vibratory Tie Tampers, Jackson	250.00
5	6	Pneumatic Spike Drivers, Chicago Pneumatic #117	250.00
6	3	Rail saws, Racine	300.00
7	2	Air Compressors rail mounted, self-propelled, Jaeger 125 c.f.m.	2,000.00
8	8	Push cars, 5 ton capacity, Northwestern	135.00
9	1	Ballast Regulator with plow, Kershaw Mfg. Company	7,000.00
10	1	Locomotive, standard gauge, 3 ton Brookville	1,250.00
11	1	Hydraulic spike puller, Nordberg	450.00
12	1	Adzing machine, Nordberg	750.00
13	1	Tie Borer, Raco	350.00
14	4	Kribbers, 40" Wheel with 3rd position carriage, Kershaw Mfg. Company	1,250.00
15	2	Mocar Cranes, Kershaw Mfg. Co.	1,500.00

THE EQUIPMENT LISTED BELOW IS BRAND NEW NEVER USED AND IN ORIGINAL CRATES:

16	2	Adzers, Model EZ, Nordberg	20% off list
17	3	Track Drills, Model CD, Nordberg	20% off list
18	1	Spike Driver, Model AE, Nordberg	20% off list
19	2	Hydraulic Jacks, Model DJ, Nordberg	20% off list
20	6	Push cars, 3 ton capacity, Fairmont	20% off list
21	2	Spike pullers, Nordberg	20% off list

ROYCE KERSHAW COMPANY, INC.
Railroad Contractors
P. O. Box 510, Phone 3-5581, Montgomery, Alabama

FOR SALE
LOCOMOTIVES— DUMP CARS

5—65 ton H. K. Porter Diesel electric locomotives. 400 HP. General Electric and Cummins equipment. Completely reconditioned.

10—Koppel and Western 30 cu. yd. Air Dump Cars. Lift type doors with side aprons. All Steel. Bargain.

MISSISSIPPI VALLEY EQUIPMENT CO.
509 Locust St St. Louis 1, Mo

Educational Services for RAILROAD MEN

Our New Service on Diesel Locomotive Operation is highly recommended for Engineers and Firemen

The Railway Educational Bureau
Omaha 2, Nebraska

POSITION OPEN

Permanent position for an AAR billing clerk for a well established Chicago, Illinois, Private Car Line. Address replies stating experience, age, qualifications etc. to

Box 747,
RAILWAY AGE
30 Church St., New York 7, N.Y.

WANTED

Representative to handle our account on Elliptic Springs for locomotives and coaches Chicago Area.

Write Box 748
RAILWAY AGE
30 Church St., New York 7, N.Y.

ADVERTISERS IN THIS ISSUE

ACF Industries, Inc. 18, 19
Agency—Hicks & Greist, Inc.

Bell Telephone Co. ..... Inside Front Cover
Agency—N. W. Ayer & Son, Inc.

Byers Co., A. M. ..... Front Cover
Agency—Ketchum, MacLeod & Grove, Inc.

General Electric Co. 12, 13
Agency—G. M. Basford Co.

General Railway Signal ..... Back Cover

Great Lakes Steel Corp. 16
Agency—Campbell-Ewald Co., Inc.

Iron & Steel Products, Inc. ..... Inside Back Cover

Mississippi Valley Equipment Co. .... Inside Back Cover

Railway Educational Bureau, The .... Inside Back Cover

Remington Arms Co., Inc. 1
Agency—Batten, Barton, Durstine & Osborn, Inc.

Royce Kershaw Co., Inc. ..... Inside Back Cover

Ryerson & Son, Inc., Joseph T. ..... Inside Back Cover

Union Switch & Signal 2
Agency—Batten, Barton, Durstine & Osborn, Inc.

Westinghouse Air Brake Co. 4
Agency—Batten, Barton, Durstine & Osborn, Inc.

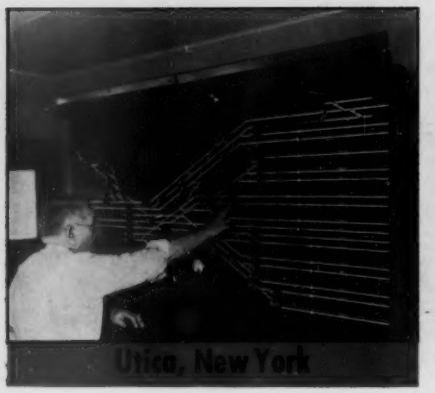
STEEL *in stock at* **RYERSON**

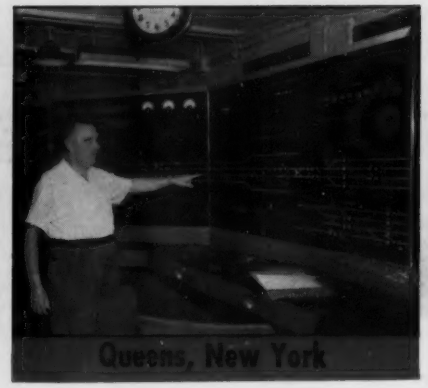
Joseph T. Ryerson & Son, Inc., Plants: Chicago, Milwaukee, St. Louis, Cincinnati, Detroit, Cleveland, Buffalo, Boston, Philadelphia, Charlotte, N.C., Jersey City, Pittsburgh, Los Angeles, San Francisco, Seattle, Spokane.

BARS—carbon & alloy, hot rolled & cold finished
STRUCTURALS—channels, angles, beams, etc.
PLATES—sheared & U. M., Inland 4-Way Floor Plate
SHEETS—hot & cold rolled, many types and coatings
TUBING—boiler & mechanical, seamless & welded
STAINLESS—Allegheny plates, sheets, bars, tubes

G·R·S NX (eNtrance - eXit) INTERLOCKING

simplifies train directing at . . .

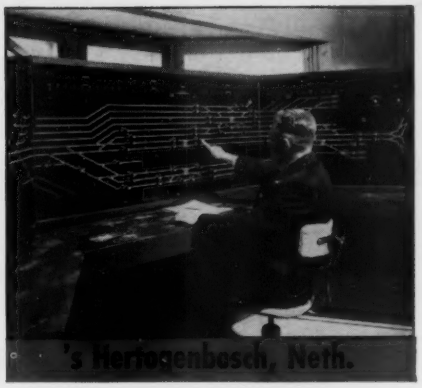

Utica, New York

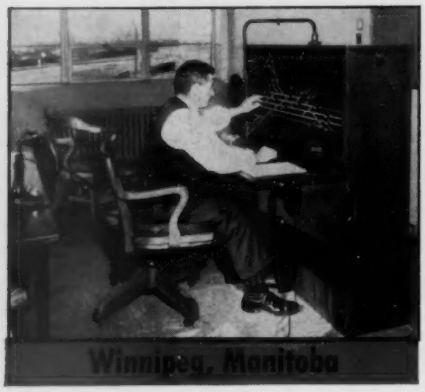

Queens, New York

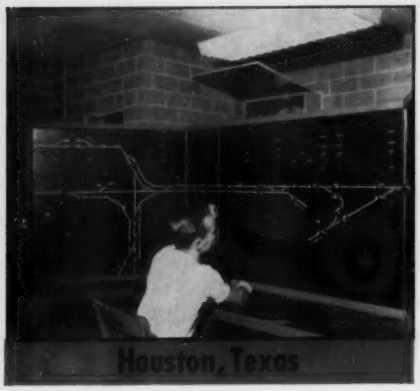
Kansas City, Missouri

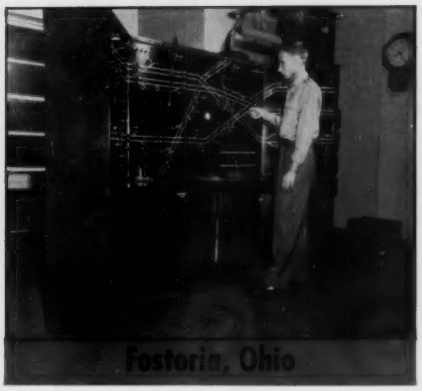
Johannesburg, So. Africa

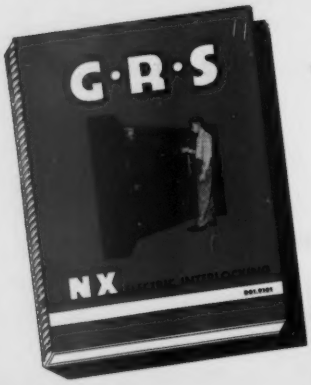
Mexico City, Mexico


's Hertogenbosch, Neth.


Winnipeg, Manitoba


Houston, Texas


Fostoria, Ohio



. . . and at many other interlockings.

NX operation is simple.
Push an entrance knob and an exit button
on the control panel to line up any route.

For a complete description write for publication D01.9101.

GENERAL RAILWAY SIGNAL COMPANY

New York 17 Chicago 3 ROCHESTER 2, N.Y. St. Louis 1 A-2643